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Full-Scale Utility FGD (Flue Gas Desulfurization) System Adipic Acid Demonstration Program. Volume 2 Continuous Emissions Monitoring Results

Radian Corp., Austin, TX

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Adipic Acid	Dibasic Organic Acids	Stationary Sources	07C	
Flue Gases			21B	
Desulfurization			07A, 07D	
Scrubbers			13I	
Limestone			08G	

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FULL-SCALE UTILITY FGD SYSTEM ADIPIC ACID DEMONSTRATION PROGRAM: VOLUME II. CONTINUOUS EMISSIONS MONITORING RESULTS

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ABSTRACT

This report is the culmination of a series of projects sponsored by the Environmental Protection Agency investigating the use of adipic acid as an additive to enhance SO_2 removal in limestone flue gas desulfurization systems. A nine-month demonstration program was performed at the 194 MW Southwest Power Plant of City Utilities, Springfield, MO, demonstrating the effectiveness of adipic acid, and dibasic acid, a by-product obtained during production of adipic acid. The test program examined the effect of adipic acid addition to a limestone FGD system under natural and forced oxidation modes of operation.

The major conclusions obtained are as follows: (1) adipic acid addition is a feasible method for improving SO_2 removal in systems that are limited by soluble alkalinity in the scrubber slurry feed; (2) the correlation from TCA prototype testing at Shawnee by TVA adequately predicts full-scale system performance for SO_2 removal as a function of adipic acid concentration and pH; (3) limestone utilization can be improved with adipic acid addition because a lower scrubber feed can be used to achieve a given SO_2 removal; (4) increased limestone utilization from the addition of adipic acid can improve system reliability by reducing the accumulation of precipitating solids, especially in forced oxidized systems; and (5) the performance of dibasic acid provides an equivalent alternative to the use of adipic acid and was also the least expensive alternative examined for the SWPP to meet their SO_2 removal requirement.

This report is submitted in fulfillment of Contract Number 68-02-3191 by Radian Corporation under the sponsorship of the U.S. Environmental Protection Agency. This report covers a period from January 1981 to September 1981.

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SECTION 1

INTRODUCTION

This volume reports the results of the continuous monitoring effort during the full-scale adipic acid demonstration at City Utilities (C.U.) of Springfield's (MO) Southwest Power Plant (SWPP). This volume is divided into the following sections:

Section 2 - Continuous Monitoring System (CMS) Description
Section 3 - Results of CMS Certification
Section 4 - Quality Assurance Program
Section 5 - CMS Reliability

The bulk of the data is presented in the appendices:

Appendix A - Certification Sample Calculations and Data Sheets
Appendix B - Zero and Span Checks
Appendix C - SO_2 Stratification Data
Appendix D - Continuous Monitoring Data

SECTION 2

CONTINUOUS MONITORING SYSTEM DESCRIPTION

The monitoring system operates by periodic extraction of a sample of flue gas from the plant duct work and analysis of the gas for its SO_2 and O_2 concentrations. Analysis of the flue gas entering each of the two scrubber modules is handled by a DuPont Model 400 SO_2 analyzer modified for two point sampling and a Thermox Model WDG III O_2 analyzer. For analysis of the flue gas exiting each scrubber, a DuPont Model 460 and Thermox WDG III analyzer arrangement similar to that at the inlet to the scrubbers is used.

Figure 2-1 shows the location of the instruments and sample ports with respect to the scrubbers. The locations of the sample ports were limited to those installed during construction of the plant. They represent the best locations for determining the individual performance of the two modules considering the constraints of the FGD system duct work.

Ecah of the four sample acquisition systems consist of:

1) a 30 micron stainless steel mesh filter and shield,
2) a 1/2 inch stainless steel probe fixed in the center sample port,
3) fifty feet of 400°F self limiting heat traced and insulated 1/4 inch double tube Teflon sample line, and
4) a moisture trap located in the DuPont analyzer.

At each sample location, the filter is positioned in the centroid of the duct. The centroid is defined as the innermost one percent crossectional area of the duct. This location was selected as part of the procedure outlined in the EPA Continuous Emissions Monitoring Certification Test. Results of the monitoring system certification are discussed in the next section.

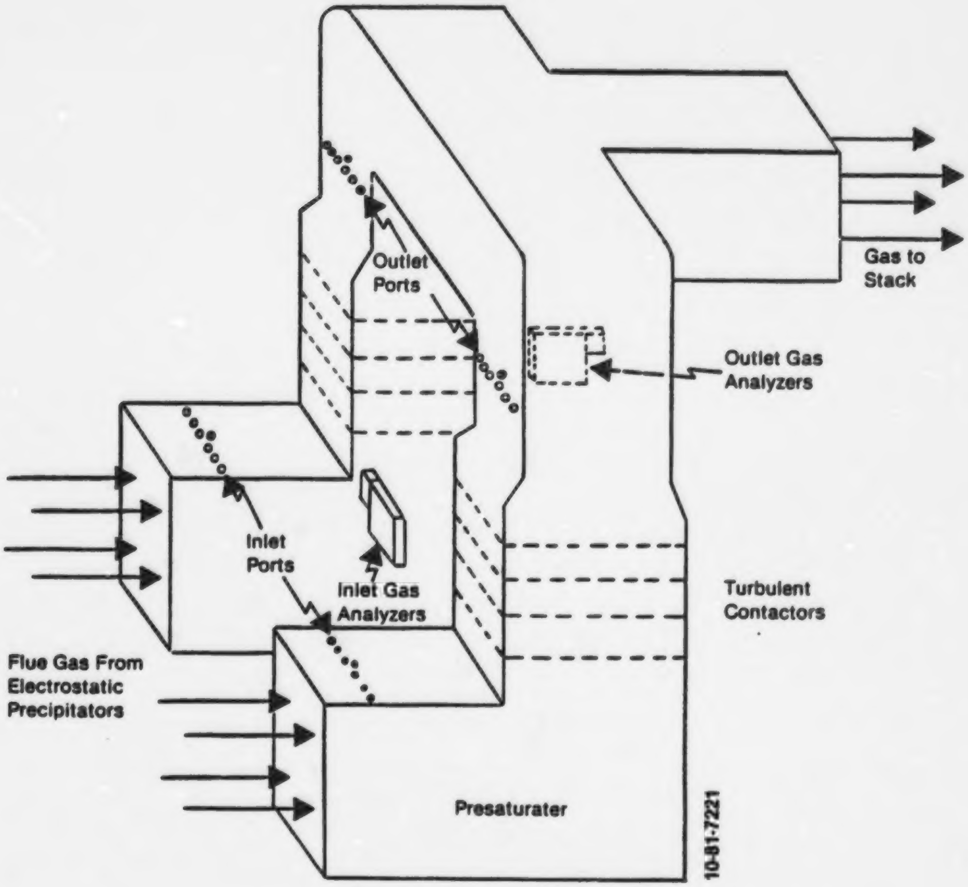

Outlet Ports
Gas to Stack
Outlet Gas Analyzers
Inlet Ports
Inlet Gas Analyzers
Turbulent Contactors
Flue Gas From Electrostatic Precipitators
Presaturater
10-81-7221

Figure 2-1. Location of Continuous Monitors and Sample Ports.

To monitor the performance of both modules, the analyzers cycle from one scrubber to the other every six minutes. The inlet and outlet of one module are sampled simultaneously for three minutes of the six minute period. For the other three minutes, regulated instrument air purges the instruments and sample acquisition lines to reduce problems with corrosion and pluggage.

The signal outputs from the analyzers are recorded by two separate data acquisition systems. Primary data logging is by a Radian DART II microprocessor. A six point chart recorder serves as backup to the microprocessor to maximize data capture. Figure 2-2 shows a schematic of the data aquisition system. Table 2-1 is an example of the hourly report furnished by the microprocessor. In addition, at the end of a day, a daily report is printed which includes all the hourly averages and an average over the 24-hour period. The SO_2 and O_2 values measured by the analyzers are used to compute SO_2 emissions into and out of the scrubbers on a pounds per million Btu boiler heat input basis. The emission numbers are calculated using the EPA developed dry F-factor calculation. Moisture values for the flue gas before and after the scrubbers are measured manually on a routine basis. These numbers are averaged and input to the microprocessor for its use in calculating the SO_2 emissions. The gas samples were kept above the moisture dewpoint throughout the sample acquisition system to prevent water condensation.

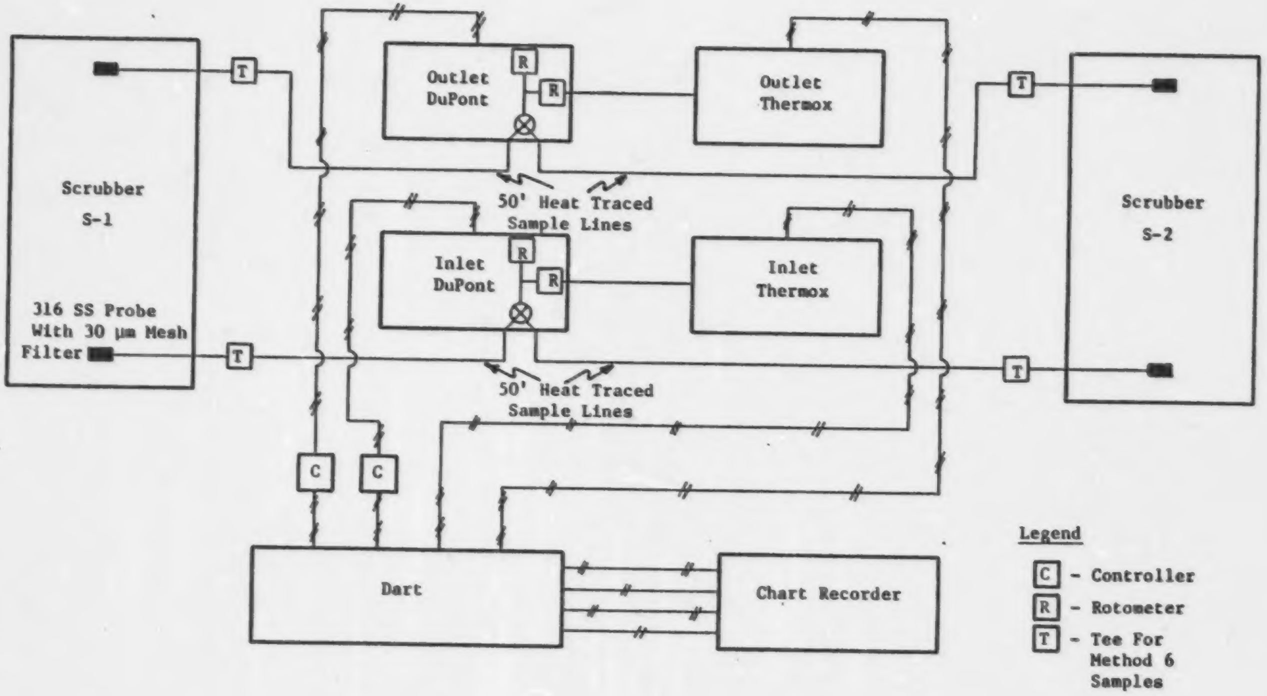

Scrubber
S-1
316 SS Probe
With 30 µm Mesh
Filter
T
Outlet
DuPont
R
Outlet
Thermox
50' Heat Traced
Sample Lines
Inlet
DuPont
Inlet
Thermox
Scrubber
S-2
C
Dart
Chart Recorder
Legend
C - Controller
R - Rotometer
T - Tee For
Method 6
Samples

Figure 2-2. Block diagram of SO_2 continuous monitoring equipment.

TABLE 2-1. DART HOURLY REPORT FORMAT

```
        ADIPIC ACID DEMO

 ** CHANNEL HOURLY REPORT **
 HOUR = 08
REPORTED AT 09:00:00  24 AUG 1981
  LABEL                                                    OBSERVATIONS
                 08:01:05  08:07:05  08:13:05  08:19:05  08:25:05  08:31:05  08:37:05  08:43:05  08:49:05  08:55:05
S1 INLET SO2                2091.92             2138.31             2195.06             2113.77             2136.85
S1 OUTLET SO2                 82.31               86.28               77.44               54.99               93.79
S1 INLET O2                    6.74                6.53                6.37                6.42                6.48
S1 OUTLET O2                   6.21                5.99                5.82                6.08                5.92
INLET H2O           0.030     0.020     0.080     0.080     0.060     0.020     0.080     0.080     0.080     0.080
OUTLET H2O          0.140     0.140     0.140     0.140     0.140     0.140     0.140     0.140     0.140     0.140
S1 IN LB/MMBTU                 5.81                5.84                5.92                5.92                5.82
S1 OUT LB/MMBT                 0.24                0.25                0.22                0.16                0.27
S1 % SO2 RED                  95.82               95.72               96.27               97.24               95.35
S2 INLET SO2     2089.37             2127.48             2125.48             2173.00             2141.37
S2 OUTLET SO2      65.37               64.11               69.66               62.72               59.84
S2 INLET O2         6.76                6.50                6.50                6.23                6.29
S2 OUTLET O2        5.84                5.77                5.69                5.65                5.72
S2 IN LB/MMBTU      5.82                5.80                5.79                5.80                5.75
S2 OUT LB/MMBT      0.19                0.18                0.20                0.18                0.17
S2 % SO2 RED       96.79               96.84               96.60               96.95               97.05


  LABEL      AVERAGE
S1 INLET SO2     2135.18
S1 OUTLET SO2      79.00
S1 INLET O2         6.55
S1 OUTLET O2        6.01
INLET H2O           0.08
OUTLET H2O          0.14
S1 IN LB/MMBTU      5.84
S1 OUT LB/MMBT      0.23
S1 % SO2 RED       96.09
S2 INLET SO2     2131.74
S2 OUTLET SO2      64.34
S2 INLET O2         6.46
S2 OUTLET O2        5.74
S2 IN LB/MMBTU      5.79
S2 OUT LB/MMBT      0.18
S2 % SO2 RED       96.85
```

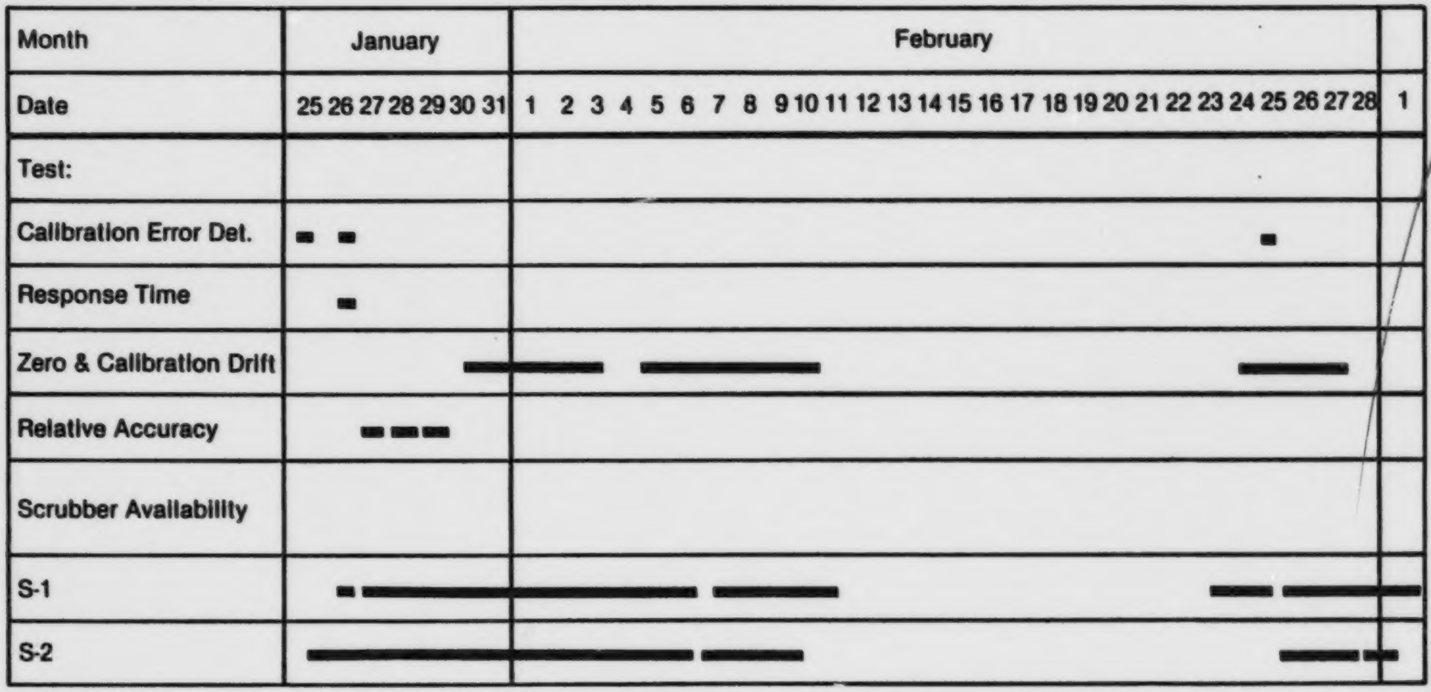
SECTION 3

RESULTS OF CMS CERTIFICATION

The operational test period lasted from January 25 through March 1, 1981. During this time the SO_2 monitoring system operated a minimum of 168 hours. Although the continuous monitoring system was available to operate for all but 6 hours of the period, it did not gather data continuously throughout the entire certification testing period due to FGD system failures. The certification testing scheduled is illustrated in Figure 3-1 along with the scrubber availability for this period.

The certification effort consisted of: (1) stratification checks, (2) laboratory quality assurance checks, (3) calibration error determination, (4) response time determination, (5) zero and calibration drift tests, and (6) relative accuracy determinations. Each of these areas are discussed after a brief summary.

Table 3-1 summarizes the results of the certification tests. In each case, the SO_2 continuous monitoring system at Southwest Power Plant met the required specification as listed in "Proposed Rules", Federal Register (Vol. 44, No. 197). The calibration error is higher for the mid-level gas than for the high-level gas. While this difference is insignificant in this case, a minor linearity problem in the analyzers and/or recorders could exist. The response times were all well below the required 15 minutes. The only value that was close to the specification was the 24-hour calibration drift on the outlet DuPont. A daily zero and span adjustment on the analyzers will keep them within the specified drift values.



10-81-1981

Figure 3-1. Certification testing schedule.
Southwest Power Plant - Springfield, MO

TABLE 3-1. SUMMARY OF CERTIFICATION TESTING AT CITY UTILITIES SOUTHWEST POWER PLANT, SPRINGFIELD, MISSOURI

Test	Results									Specification
Calibration Error Determination		Calibration Error (%)								
		Mid-level gas		High-level gas						
	Analyzer	DART	Chart	DART	Chart					$\leq$5% of each mid-level and high level calibration value
	Inlet DuPont	2.6	3.0	1.8	1.6					
	Inlet Thermox	3.8	2.0	1.9	1.3					
	Outlet DuPont	1.6	0.4	1.6	0.9					
	Outlet Thermox	2.6	2.1	1.9	1.4					
Response Time	Location of Gas Introduction	Gas Used	Response Time (Min)							$\leq$15 minutes
	S-1 Inlet	SO_2	2.17 downscale							
		O_2	2.02 same							
	S-2 Inlet	SO_2	2.00 upscale							
		O_2	1.60 upscale							
	S-1 Outlet	SO_2	3.46 upscale							
		O_2	3.19 upscale							
	S-2 Outlet	SO_2	1.45 downscale							
		O_2	2.25 downscale							
Zero and Calibration Drift		Zero Drift (% of span)				Calibration Drift (% of span)				
		DART		Recorder		DART		Recorder		
		2-hr	24-hr	2-hr	24-hr	2-hr	24-hr	2-hr	24-hr	$\leq$2% of span value for 2 hr $\leq$2.5% of span value for 24 hr
	Inlet SO_2	0.29	0.52	0.22	0.63	0.42	1.49	0.32	1.20	
	Inlet O_2	0.06	0.12	0.08	0.25	0.35	1.95	0.25	1.50	
	Outlet SO_2	0.85	0.82	0.76	1.17	1.00	2.35	1.16	2.30	
	Outlet O_2	0.06	0.35	0.04	0.15	0.93	0.80	–[1]	0.80	
Relative Accuracy (% difference)		DART	Recorder							$\leq$20% of the mean reference method test data, in terms of emission factors
	Inlet	4.71	4.97							
	Outlet	9.62	10.36							

[1] 2-hour calibration test for chart recorder not completed. Successful completion of the same test performed on the DART was ruled sufficient.

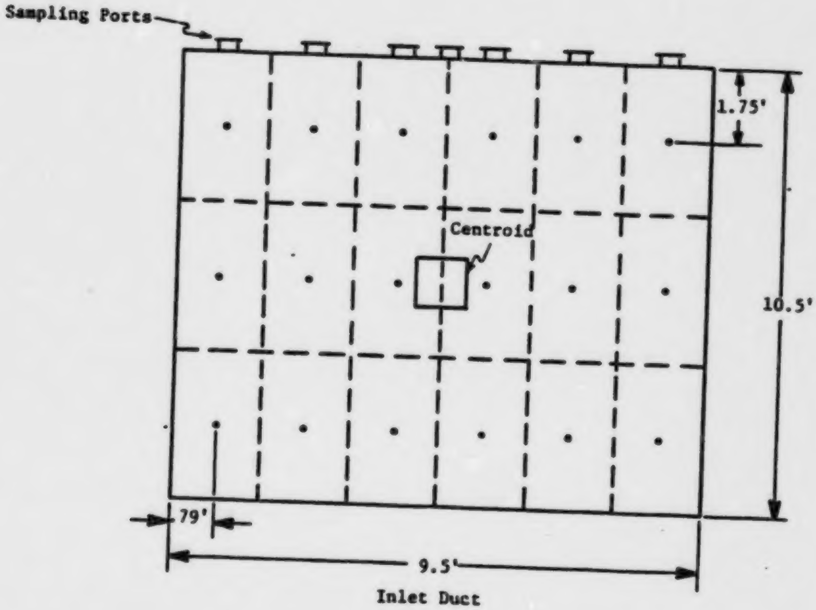
The only monitoring system equipment failures occurred February 3. A tube pluggage in the inlet Thermox interrupted a 24-hour Zero and Calibration Drift Test. The tube was replaced and the inlet O_2 24-hour drift test series was repeated. The monitoring system was out of service for about 6 hours as mentioned previously.

A Radian DART II System was used as the primary data acquisition system, and the printouts of important test results are included in Appendix A. A 6-channel chart recorder was used throughout the certification testing as a backup. The test results for the chart recorder are included in the report but the chart recordings are not.

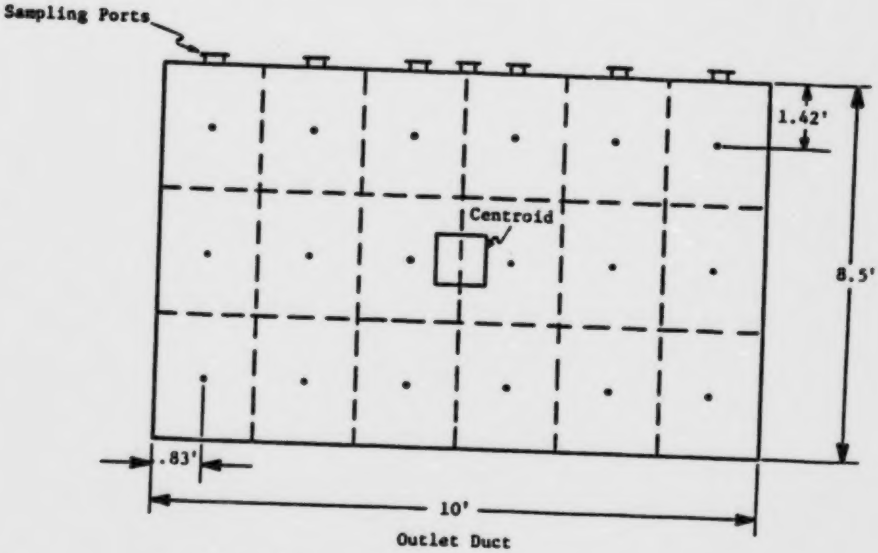
3.1 STRATIFICATION TESTING

Stratification refers to variations in the measured SO_2 or O_2 concentration of the stack gas depending upon the position of the sample probe in the duct. To minimize stratification, the Federal Register suggests that the placement of the sample probe be at least two equivalent duct diameters upstream of the nearest duct obstruction and at least one half of an equivalent duct diameter downstream of the exhaust. If the sample probe location criteria cannot be met (as in the case of the Southwest Power Plant), two stratification tests must be performed on each duct. In both tests the average value at the proposed probe location must be within 10 percent of the average value obtained from a traverse of the duct. The purpose of the stratification tests is to locate the probe in a position that will draw a representative sample of the composition over the crossectional are of the duct.

At Springfield, at least two 18-point traverses were performed on the inlet and outlet ducts of both scrubber modules. The traverse sample locations are illustrated in Figure 3-2. The results are shown in Table 3-2. The SO_2 concentrations are corrected to 4 percent O_2 to account for the variations in the O_2 dilution. In each case the average centroidal value was within 10 percent of the 18-point mean. Therefore, the centroid was selected as the sample probe location in each duct.


Sampling Ports
1.75'
Centroid
10.5'
.79'
9.5'

Inlet Duct


Sampling Ports
1.42'
Centroid
8.5'
.83'
10'

Outlet Duct

Figure 3-2. Stratification check sample point locations.

Table 3-2 indicates that stratification was much more of a problem in the outlet ducts as shown by the maximum deviation between the traverse mean and any single point measurement. The results of the January 10 outlet duct stratification tests are presented in Figure 3-3. For this plot the values were corrected to account for fluctuations in the SO_2 measurements at the centroid as the test proceeded. The SO_2 values for each part were multiplied by a ratio of the SO_2 measurement taken at the centroid after each part traverse divided by the average SO_2 measurement taken at the centroid for the entire run. The sample calcuations and stratification data sheets are found in Appendix B and C, respectively.

3.2 QUALITY ASSURANCE

Quality assurance is dividied into: (1) sample analysis, and (2) calibration gas verification.

3.2.1 Sample Analysis

Ion chromatography (I.C.) was used at the primary method of analysis to determine the amount of sulfate in the peroxide impingers (EPA Method 6 tests). Random samples were also titrated by the Thorin method to verify the results of the ion chromatography analysis. In addition, three unknown QA samples, obtained from the EPA, were analyzed by both Thorin and I.C. methods. The results of the quality control deuplicate sample analysis are presented in Table 3-3. This shows that Thorin and I.C. analyses agreed well with the maximum deviation 4.1 percent. The comparison of the audit sample value to the I.C. results also shows good agreement with the deviation ranging from 3.7 to 4.7 percent.

The sulfate breakthrough in the first impinger (as measured by sulfate in the second) ranged from 9.0 to 0.7 percent, but averaged around 1.0 percent. The sulfate used in the calculations was the sum of the two impinger values.

TABLE 3-2. SUMMARY OF STRATIFICATION TESTS

Date	Duct	Mean of 18 point Traverse (ppm SO_2, Corrected to 4% O_2)	Mean of Centroid Values (ppm SO_2, Corrected to 4% O_2)	Deviation Between Means %	Max Deviation Between 18 Pt. Mean and any Pt. %
1/10/81	S-1 Outlet	1400	1360	2.9	20
1/10/81	S-2 Outlet	1220	1240	1.6	36
1/14/81	S-1 Outlet	1350	1230	9.8	33
1/14/81	S-2 Outlet	1170	1240	6.0	35
1/16/81	S-2 Inlet	2880	2910	1.0	5
1/16/81	S-2 Inlet	2860	2830	1.1	3
2/7/81	S-1 Outlet	1360	1270	6.9	35
2/14/81	S-1 Outlet	310	340	9.7	58
3/1/81	S-1 Inlet	3190	3040	4.7	6
3/1/81	S-1 Inlet	3170	3070	3.2	6

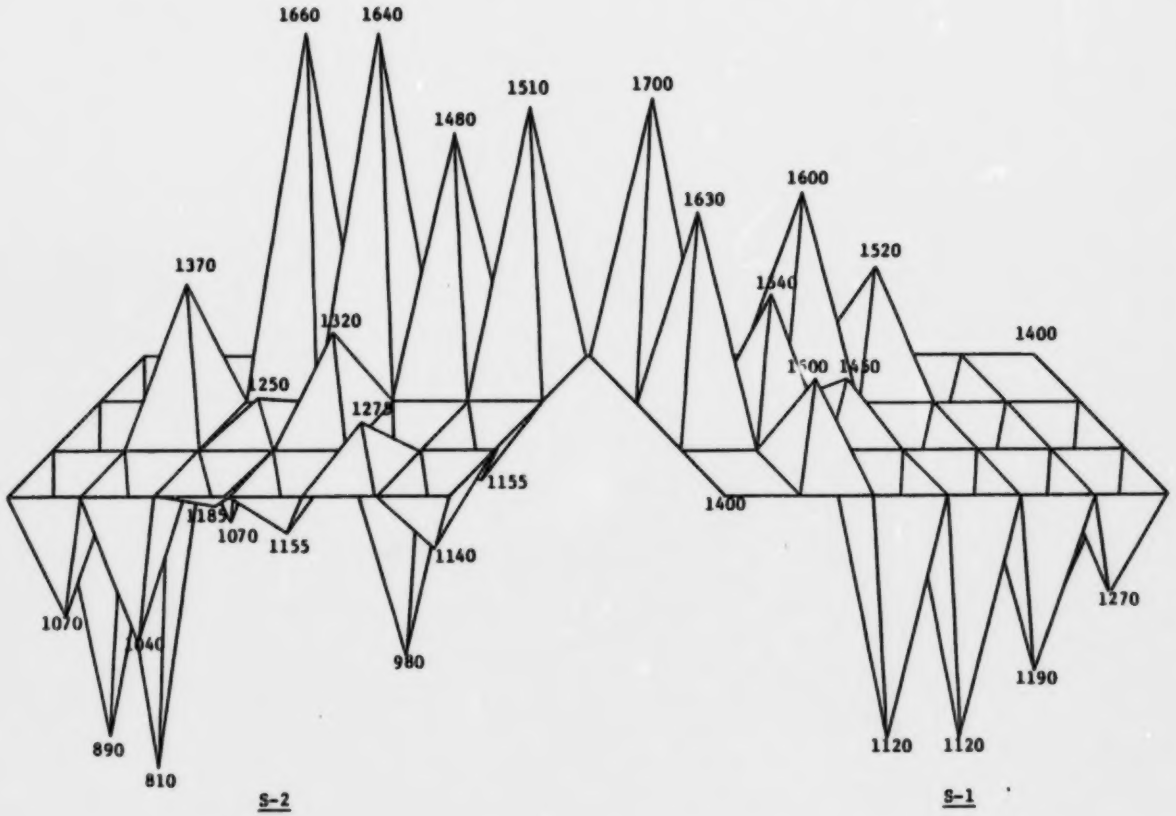


Figure 3-3. SO_2 stratification in the outlet ducts (1-10-81) (variance from the mean).

TABLE 3-3. QUALITY CONTROL DUPLICATE SAMPLE ANALYSIS

Sample Number	Thorin (mg/ℓ)	I.C. (mg/ℓ)	Audit[1] Value	% Difference[2]
RANDOM SAMPLES				
01/27/81/3	0.05275	0.0513		2.7 [3]
01/28/81/10	0.04715	0.0452		4.1 [3]
01/28/81/7	0.03382	0.0334		1.2 [3]
01/29/81/16	0.1362	0.1318		3.2 [3]
EPA QA SAMPLES				
EPA Number	(mg/dscm^3)	(mg/dscm^3)		
1697	221	218	228.8	4.7 [4]
3315	-	1102	1143.9	3.7 [4]
5574	2456	2385	2478.5	3.8 [4]

[1] Values for EPA samples provided by Robert Fuerst, EPA/QAD.

[2] For EPA samples difference between the audit value and the I.C. value must be <7.0%.

[3] Thorin-I.C./Thorin.

[4] Audit-I.C./Audit.

3.2.2 Calibration Gas Concentration Verification

The SO_2 calibration gases were obtained from SCOTT-MARRIN, Inc. and were used as received. The letter certifying that these gases were prepared according to National Bureau of Standards protocol was received. The concentrations of the O_2 calibration gases were reported but not certified by the supplier. Radian determined the O_2 values using Fyrite® analysis. The results are shown below:

TABLE 3-4. RESULTS OF FYRITE® ANALYSIS

Tag Value of Gas (% O_2)	Fyrite® Analysis (% O_2) Run Number: 1	2	3
9.6	9.6	9.6	9.6
8.0	7.6	7.6	7.8

Since the Fyrite® value in each case was within 5% of the manufacturer's tag value, the tag value was used, as specified in the "Proposed Rules."

3.3 CALIBRATION ERROR DETERMINATION

Fifteen non-consecutive zero, mid-level, and high level measurements were taken. This resulted in five measurements at each level. The SO_2 and O_2 calibration gases used for the measurements were introduced to the DuPont analyzer directly from the cylinders. The calibration gas concentrations are listed below:

TABLE 3-5. CALIBRATION GAS CONCENTRATIONS

Level	Concentration of SO_2 gas (ppm)	Concentration of O_2 gas (%)
Zero	0 (air)	0 (SO_2 span gas)
Mid	2033	8.0
High	3443	20.9 (air)

The measured concentrations were recorded by the DART. The calibration error calculated as shown in the sample calculations Appendix and the Proposed Regulation in the Federal Register must be less than 5% to pass the certification. The inlet and outlet SO_2 and O_2 instruments all met this criterion, as shown in Table 3-1.

3.4 RESPONSE TIME

The response time of the system was calculated as the slower of the average upscale and the average downscale response times. The response times for SO_2 and O_2 were measured separately at inlet and outlet of both scrubber modules resulting in eight response time tests.

Each test consisted of three upscale (zero calibration gas to stack gas) and three downscale (high-level calibration gas to gas stack) measurements. The response time for each measurement was recorded as the time the system took to reach a "stable value"[1] after the switch to stack gas. The values were printed out on the DART at up to 30 second intervals until the stable value was reached.

The SO_2 downscale measurements were made simultaneously with the O_2 upscale measurements and, likewise, the SO_2 upscale measurements were made simultaneously with the O_2 downscale measurements. The high-level SO_2 calibration gas served as the zero O_2 gas, and the zero SO_2 gas (air) served as the high-level O_2 gas. This reduced the number of actual tests to four.

The response time criterion defined in the Federal Register is 15 minutes. Table 3-1 shows that all instruments responded much more quicly than this value.

3.5 ZERO AND CALIBRATION DRIFT TESTS

Two hour and 24-hour zero calibration drift tests were performed on each analyzer. A two-hour drift test consisted of a series of 15 non-over-lapping two-hour periods. And the 24-hour drift tests consisted of a series of seven non-over-lapping 24-hour periods. The two-hour tests were run simultaneously with the 24-hour tests.

The zero and high-level values were recorded on the DART before and after the two- or 24-hour period. The mean, confidence interval and calibration drift (% of span) were calculated from the recorded values.

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[1] "Stable value" as defined in the Federal Register (Vol. 44, No. 197, pg. 56821) is equivalent to a change of less than 1 percent of the span value for 30 seconds...

To pass the certification test, the 2-hour drift value must be less than 2 percent and the 24-hour drift less than 2.5 percent. All instruments passed this test as shown in Table 3-1.

3.6 RELATIVE ACCURACY

The relative accuracy tests were performed to determine the overall accuracy of the SO_2 continuous monitoring system. This was accomplished by comparing the value of the total SO_2 emissions in pounds per million Btu's ($lb/10^6$ Btu) calculated from the monitoring system results to the value calculated from the results of reference methods.

To convert from SO_2 in ppm to SO_2 in $lb/10^6$ Btu the percent H_2O and the percent O_2 must be known as well as an F-factor. The F-factor is dependent upon the fuel type. A "tee" was placed between the probe and sample line so that samples could be pulled through an EPA Method 6 sample train at the same time the monitors recorded the composition. The EPA Method 6 determined the Reference Method value for the SO_2 and the H_2O. Before and after each EPA Method 6, a sample was drawn to determine the O_2 Reference Method (EPA Method 3) concentration by Fyrite® analysis.

Since H_2O is not monitored, the reference method value was used to calculate the monitor value for SO_2 ($lb/10^6$ Btu).

The monitoring system values were printed on the DART and the chart recorder during the relative accuracy tests and the results are summarized in Table 3-1. The inlet and outlet instruments passed the 20% relative accuracy criterion defined by the "Proposed Rules".

SECTION 4

QUALITY ASSURANCE PROGRAM

Following the certification of the instruments, several steps were taken to ensure that the quality of the continuous monitoring data remained high throughout the program. These steps include:

(1) routine comparisons between EPA Method 3 and Thermox data and between EPA Method 6 and the Dupont data,

(2) daily instrument zero and calibration checks, and

(3) routine stratification checks.

4.1 REFERENCE METHOD/CONTINUOUS MONITOR DATA COMPARISON

Tables 4-1 and 4-2 present the results of the CMS relative accuracy checks performed as part of the QA program. The data in Table 4-1 was taken during the forced oxidation test phase and data in Table 4-2 was taken during the natural oxidation test phase.

The relative accuracy of the monitoring system was 19 percent for the March-April time period during forced oxidation testing. During the natural oxidation test period, May-September, the system relative accuracy was 12 percent. This improvement is attributable to several reasons. First and probably most significantly, most of the checks done in the March-April period were made with a separate sampling probe being used for the Reference Method. Due to the degree of SO_2 stratification in the module outlet ducts at the sampling locations (see Section 4.3), the CMS probe and the Reference Method probe were not analyzing the same gas despite being located within inches of each other. This was confirmed by manually moving the CMS probe

TABLE 4-1. CMS RELATIVE ACCURACY CHECKS - MARCH-APRIL, 1981

Date	SO_2(ppm, wet)		H_2O(%)	O_2(%, wet)		SO_2(lb/10^6 Btu)		
	Reference	DART	Reference	Reference	DART	Reference	DART	Difference
3/13/81	507	416	-	8.5	7.1	1.42	1.05	0.37
3/13/81	519	400	-	8.0	7.0	1.40	1.00	0.40
3/13/81	604	510	14.3	7.5	7.0	1.56	1.27	0.29
3/19/81	406	350	15.1	7.5	6.8	1.05	0.86	0.19
3/19/81	343	305	14.6	7.25	6.9	0.87	0.76	0.11
3/19/81	334	306	15.3	7.0	6.7	0.83	0.75	0.08
3/21/81	224	243	15.6	6.25	6.4	0.53	0.58	-0.05
3/21/81	219	230	15.5	6.0	6.5	0.51	0.55	-0.04
3/21/81	234	243	15.8	6.0	6.5	0.54	0.59	-0.05
3/25/81	322	315	15.0	7.25	6.9	0.82	0.78	0.04
3/25/81	322	315	15.0	7.0	6.5	0.80	0.76	0.04
3/25/81	353	322	15.2	7.0	6.9	0.88	0.80	0.08
4/2/81	94	130	16.2	7.4	7.3	0.24	0.33	-0.09
4/2/81	55	114	15.8	7.1	6.3	0.14	0.27	-0.13
4/2/81	96	123	15.9	6.8	6.3	0.24	0.29	-0.05
4/10/81	50	68	16.2	7.2	7.2	0.13	0.17	-0.04
4/10/81	48	71	16.6	7.6	7.3	0.13	0.18	-0.05
4/10/81	47	119	16.6	7.9	7.8	0.13	0.32	-0.19
4/8/81	112	102	19.1	7.45	6.9	0.29	0.25	0.04
4/16/81	115	102	19.5	7.85	7.0	0.31	0.25	0.06
4/16/81	99	105	17.5	7.9	6.9	0.26	0.26	0.00
4/21/81	101	92	14.0	9.2	9.2	0.30	0.27	0.03
					ΣXi	-	-	1.04
					ΣXi^2	-	-	0.53
					Average	0.61	-	0.05
					Confidence Interval	-	-	0.067
					Relative Accuracy	-	-	19%

TABLE 4-2. CMS RELATIVE ACCURACY CHECKS - MAY-SEPTEMBER, 1981

Date	SO_2(ppm, wet)		H_2O(%)	O_2(%, wet)		SO_2(lb/10^6 Btu)		
	Reference Method	DART	Reference Method	Reference Method	DART	Reference Method	DART	Difference
5/28/81	551	625	13.3	7.1	6.7	1.39	1.53	-0.14
5/28/81	469	624	13.3	7.1	6.6	1.18	1.52	-0.34
5/28/81	576	694	21.4	7.1	6.6	1.45	1.77	-0.32
6/2/81	547	633	15.1	5.3	5.6	1.60	1.80	-0.20
6/2/81	566	659	15.4	5.3	5.3	1.59	1.85	-0.26
6/2/81	565	643	15.4	5.3	5.3	1.58	1.80	-0.22
6/4/81	661	757	16.0	5.0	5.1	1.83	2.11	-0.28
6/4/81	627	682	15.8	5.0	4.9	1.73	1.87	-0.14
6/11/81	404	450	14.4	5.7	5.7	1.15	1.28	-0.13
6.11/81	443	469	15.1	5.7	5.7	1.28	1.35	-0.07
6/11/81	482	489	12.6	5.7	5.8	1.33	1.36	-0.03
6/24/81	457	463	14.0	6.0	5.9	1.32	1.33	-0.01
6/24/81	498	445	14.2	5.8	5.7	1.42	1.26	0.16
6/24/81	538	441	15.0	5.5	5.4	1.52	1.24	0.28
7/2/81	413	465	16.4	4.9	4.7	1.14	1.27	-0.13
7/2/81	374	412	16.0	4.9	5.3	1.03	1.16	-0.13
7/2/81	345	360	15.7	4.9	5.4	0.94	1.02	-0.08
7/24/81	536	522	15.5	5.7	5.2	1.22	1.15	0.07
7/24/81	484	516	15.6	5.7	5.4	1.10	1.15	-0.05
8/21/81	97	110	15.0	7.5	6.5	0.30	0.34	-0.04
8/21/81	94	110	14.9	7.5	6.5	0.29	0.34	-0.05
9/9/81	176	173	13.1	7.3	7.4	0.57	0.56	0.01
9/9/81	168	162	13.2	7.1	7.0	0.52	0.50	0.02
9/9/81	143	137	12.9	7.0	6.8	0.43	0.42	0.01
9/17/81	479	566	12.1	6.3	6.4	1.39	1.65	-0.26
9/17/81	551	570	13.7	6.3	-	1.63	1.68	-0.05
9/17/81	511	540	11.7	6.3	6.0	1.43	1.51	-0.08
					Xi	-	-	2.48
					Xi	-	-	0.75
					Average	1.20	-	0.09
					Confidence Internal	-	-	0.06
					Relative Accuracy	-	-	12%

during a sample cycle and observing a notable change in SO_2 concentration over a distance of only 4-6 inches. This arrangement was subsequently changed so that the Reference Method sample was extracted through a tee in the CMS sample line. In addition, a larger sample population (27 vs. 22) during the May-September time period aids in improving the relative accuracy. Also, the average SO_2 concentration measured was much lower during the March-April testing making zero and span drift error a larger percentage of the actual reading.

4.2 DAILY INSTRUMENT ZERO AND SPAN CHECKS

Both SO_2 and O_2 instruments were checked daily for zero and span drift. Adjustments were made as necessary to compensate for any measurable drift that had occurred. These checks served not only to control drift but also to maintain close surveillance on the operating condition of the monitors including sample flow rates, plumbing leaks, sample cell pressures and temperatures, etc. Appendix B presents the zero and span check results for the SO_2 and O_2 monitors.

4.3 STRATIFICATION CHECKS

During the CMS Certification Testing, it was noticed that there was significant SO_2 stratification in the scrubber module outlet ducts at the point where the CMS extracted gas for analysis. To maintain documentation of the effect this was having on the reported test results, SO_2 stratification traverses were made periodically. Table 4-5 presents the results of these traverses. Appendix B contains the raw data which is summarized in Table 4-3.

As the Table shows, the point in the duct where the CMS probe was drawing its sample from (the centroid) was higher in SO_2 concentration than the average bulk gas SO_2 concentration in all but 4 cases. Reasons for this relationship are not understood, but the observation on 9/23/81 is

TABLE 4-3. SUMMARY OF SO_2 STRATIFICATION TRAVERSES ON SWPP SCRUBBER OUTLET DUCTS

Date	Flue Gas Flow Rate 10^3 acfm	Slurry pH	Slurry Adipic Conc. ppm	No. of Traverse Points	Average of Traverse Measurements ppm SO_2	Average of Centroid Measurements ppm SO_2	Percent Deviation
Module S-1							
1/10/81	280	5.2	0	18	1400	1360	-3
1/14/81	258	5.2	0	18	1340	1230	-8
2/7/81	258	5.5	0	18	1360	1310	-4
2/24/81	251	5.6	1450	18	310	340	+10
4/11/81	230	5.3	2900	18	38	60	+58
5/28/81	268	5.6	0	18	850	1010	+19
6/4/81	286	5.8	0	30	670	830	+24
8/8/81	279	5.5	550	18	180	220	+22
8/8/81	275	5.5	550	18	110	120	+9 (Both recycle pumps)
9/23/81	301	5.4	320	18	600	490	-18
Module S-2							
1/10/81	249	5.2	0	18	1220	1240	+2
1/14/81	162	5.2	0	18	1170	1240	+6
4/3/81	263	5.1	2400	18	100	140	+40
5/29/81	257	5.6	0	18	370	470	+27
6/3/81	263	5.4	0	18	720	860	+19
6/26/81	218	5.5	380	18	200	260	+30
7/3/81	139	5.0	500	18	240	270	+12
7/21/81	273	5.5	930	18	260	350	+35
8/22/81	282	5.2	1940	18	60	60	0

confirmed by process readings. During this period, lower quantities of buffer were required to maintain equivalent SO_2 removals compared to earlier periods when the centroid SO_2 concentration was higher than the bulk average. While the percent differences are quite significant in some cases, the affect on the modules removal efficiency as calculated by the bulk average number varies between 1 to 3 percentage points.

SECTION 5

CONTINUOUS MONITORING SYSTEM RESULTS

The DART (data acquisition microprocessor) was programmed to report hourly the results of the gas analyses by the SO_2 and O_2 anlayzers. Both scrubber inlet and outlet data were reported in terms of actual concentration (ppm for SO_2 and volume percent of O_2), and reduced to emission units of pounds SO_2 per million Btu boiler heat input. This data was then used to calculate the SO_2 removal efficiency for each module. The monitors were cycled so that five sets of inlet and five sets of outlet data would be recorded in one hour. The removal efficiencies were used to calculate daily average SO_2 removal efficiencies as well as 30-day rolling average SO_2 removal efficiencies. Appendix C presents the continuous monitoring data for the demonstration program. The following sections discuss briefly the problems encountered which resulted in the system being down.

5.1 CONTINUOUS MONITORING SYSTEM PERFORMANCE DURING THE FORCED OXIDATION TEST PHASE

The DuPont SO_2 monitors and Thermox O_2 analyzers were available during all of the baseline test period. However, some downtime was experienced during the adipic acid test period. It should be noted that neither the DuPont or Thermox analyzers were purchased new for this program. Both instruments are approximately ten years old and better reliability might be expected with state-of-the-art instrumentation. Major causes of continuous monitor failures include:

- coil failure in the ratchet relay which activates the switching valve in sampling stations to alternate between S-1 and S-2 modules,
- electrical short in inlet Thermox O_2 analyzer,

- aspirator pluggage and open drain valve on outlet sampling station, and
- DuPont coarse zero malfunction.

In addition to monitoring equipment problems, there were periodic difficulties with the data acquisition system. These problems were never resolved and could be attributed to the temporary nature of the installation of the microprocessor in a non-ideal location. However, prolonged downtimes due to the microprocessor were not encountered; usually the outages lasted only a matter of minutes.

The continuous monitoring system functioned 100 percent of the time during the baseline period and 77 percent of the time during the adipic test period.

5.2 CONTINUOUS MONITORING SYSTEM PERFORMANCE DURING THE NATURAL OXIDATION TEST PHASE

Numerous small problems were encountered with the continuous monitoring system during the natural oxidation testing. The most notable of these was a broken Thermox O_2 sample cell at the inlet sample station which resulted in 12½ days of downtime in June for that monitor. Overall, however, the system was available 82 percent of the time with the SO_2 monitors available 96 percent of the time required. Problems which led to monitor outages were:

- a broken Thermox O_2 analyzer sample cell,
- severe weather which knocked out the power supply to the instruments and shorted out one section of sample line heat tracing,
- electrical problems in both of the DuPont SO_2 analyzer sampling and control stations,
- failure of the cycle timer motor in the DuPont control station,

- failure of a valve in the inlet DuPont station to switch between S-1 and S-2 sample lines upon command of the control station, and
- a coil failure in the relay which controlled switching the analyzers from one module to the other.

During the baseline test period, the broken Thermox sample cell limited the overall system availability to 50 percent, although it could be argued that the one operating Thermox at the outlet was sufficient for monitoring emissions since the SWPP modules operated under positive pressure (no air in leakage possible). Over the adipic acid test period, the continuous monitoring system was availabe 95 percent of the time.

APPENDIX A

CERTIFICATION SAMPLE CALCULATIONS AND DATA SHEETS

2-HR AND 24-HR ZERO AND CALIBRATION DRIFT

Instrument SO_2 span: Inlet 0-4000 ppm
Outlet 0-1500 ppm

Test Data (2-hr test, inlet, SO_2, DART)

Data set number	Zero reading (ppm) IR	Zero reading (ppm) FR	Zero Drift	High-level reading (ppm) IR	High-level reading (ppm) FR	Span Drift	Calibration Drift
1	5	5	0	3270	3280	10	10
2	5	-10	-15	3280	3245	-35	-20
3	-10	0	10	3245	3270	25	15
4	0	5	5	3270	3310	40	35
5	5	5	0	3310	3255	-55	-55
6	5	5	0	3255	3295	40	40
7	-15	15	30	3245	3250	5	-25
8	15	0	-15	3250	3235	-15	0
9	0	-10	-10	3235	3220	-15	-5
10	5	0	-5	3220	3210	-10	-5
11	0	0	0	3210	3205	-5	-5
12	30	25	-5	3215	3230	15	20
13	50	30	-20	3350	3340	-10	10
14	30	30	0	3340	3370	30	30
15	30	0	-30	3370	3340	-30	0
		$\bar{X}_i$	-3.7				3.0

zero and span drift:

drift = initial reading (IR)-final reading (FR)

for data set 1, zero: 5-5=0

calibration drift:

$$\Delta\text{span}-\Delta\text{zero} = X_i$$

for data set 1: 10-0 = 10

Confidence Interval for zero drift =

$$C.I._{95} = \frac{t_{0.975}}{n\sqrt{n-1}} \sqrt{n(\Sigma x_i^2) - (\Sigma x_i)^2}$$

$$= \frac{2.145}{15\sqrt{14}} \sqrt{15(2925) - (55)^2}$$

$$= 7.7$$

zero drift (% of span):

$$\frac{3.7 + 7.7}{4000} (100) = \underline{0.29\%}$$

STRATIFICATION TEST:

Data for S-1 Inlet (3/1/81-1):

	Port	1	2	3	4	5	6
SO_2 (ppm)	1	2600	2390	2490	2460	2490	2560
O_2 (%)		7.37	7.53	7.42	7.42	7.53	7.26
SO_2 (ppm)	2	2730	2510	2620	2520	2500	2550
O_2 (%)		7.26	7.37	7.42	7.53	7.53	7.48
SO_2 (ppm)	3	2710	2500	2580	2450	2490	2580
O_2 (%)		7.15	7.42	7.31	7.48	7.53	7.53

Centroid values:

2474	2434	2494	2444
7.39	7.15	7.15	7.26

Measured SO_2 corrected to 4% O_2:

$$SO_2(4\%\ O_2) = SO_2(\text{meas})\left(1 + \frac{\%\ O_2\text{meas} - 4.0}{20.9 - \%\ O_2\ \text{meas}}\right)$$

$$= 2600 \left(1 + \frac{7.37-4.0}{20.9-7.37}\right)$$

$$= 3240\ \text{ppm}$$

Deviation between means:

$$\%\ \text{deviation} = \left| \frac{\text{mean 18 pt - mean centroid}}{\text{mean 18 pt}} \right| 100$$

$$= \frac{3190 - 3040}{3190}\ 100$$

$$= \underline{5.9\%}$$

RESPONSE TIME:

Test Data (S-1 Inlet, O_2 gas)

Test Run #	Response Time (Min) Upscale	Response Time (Min) Downscale
1	2.03	3.52
2	2.00	1.02
3	2.03	1.52
Average	2.02	2.02

Avg calculation downscale:

$$\text{ave} = \frac{3.52 + 1.02 + 1.52}{3}$$

$$= 2.02$$

The system response time is the slower of the two average response times or 2.02 minutes, since they are the same.

RELATIVE ACCURACY:

Test Data (Outlet, DART)[1]

Run #	SO_2 (ppm wet) RM[2]	SO_2 (ppm wet) M	H_2O RM[2]	O_2 (% wet) RM[3]	O_2 (% wet) M	SO_2 Emission Factor ($lb/10^6$ Btu) RM	SO_2 Emission Factor ($lb/10^6$ Btu) M	SO_2 Emission Factor ($lb/10^6$ Btu) Difference
1	754	853	14.20	5.83	4.98	2.16	2.28	-0.12
3	815	907	14.70	5.92	5.57	2.37	2.57	-0.20
4	801	874	13.85	5.96	5.77	2.31	2.48	-0.17
5	799	871	14.71	5.79	5.62	2.30	2.48	-0.18
6	784	875	14.46	5.83	5.47	2.26	2.45	-0.19
9	659	752	14.85	5.50	4.74	1.86	1.99	-0.13
10	683	747	14.62	5.33	5.40	1.89	2.08	-0.19
11	719	803	13.61	5.08	4.91	1.92	2.11	-0.19
12	777	864	14.83	5.00	4.92	2.11	2.33	-0.22
					average	2.13	2.31	

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[1] RM is reference method; M is monitor

[2] EPA Method 6

[3] Fyrite analysis

Calculation of lbs $SO_2/10^6$ Btu (Run #1, Reference Method):

$$E = Cws\ Fd\ \frac{20.9}{20.9\ (1-Bws) - \%O_{2_{WS}}}$$

$$Cws\ (\text{conc } SO_2) = \left(\frac{754 \text{ scf } SO_2}{10^6 \text{ scf}_{SG}}\right)\left(\frac{\text{lb mole } SO_2}{379 \text{ scf}_{SO_2}}\right)\left(\frac{64.059 \text{ lbs } SO_2}{\text{lb mole } SO_2}\right)$$

$$= 1.274 \times 10^{-4} \text{ lbs } SO_2/\text{scf}_{SG}$$

$$Fd(\text{F-factor}) = 9820 \text{ dscf}_{SG}/10^6 \text{ Btu}$$

$$Bws \begin{pmatrix}\text{fol. fraction of}\\ H_2O \text{ in stack gas}\end{pmatrix} = .1420$$

$$O_2 = 5.83\%$$

$$E = \left(1.274 \times \frac{10^{-4} \text{ lbs } SO_2}{\text{wscf}_{SG}}\right)\left(\frac{9820 \text{ dscf}_{SG}}{10^6 \text{ Btu}}\right)$$

$$\left(\left(\frac{20.9}{20.9\ (1 - .1420) - 5.83}\right)\frac{WSCF}{DSCF}\right)$$

$$= 2.16 \text{ lbs } SO_2/10^6 \text{ Btu}$$

The emission factors measured by the continuous monitors are calculated in the same manner.

95 percent confidence interval:

$$C.I._{95} = \frac{t_{0.975}}{n\sqrt{n-1}}\sqrt{\left|n(\Sigma x_i^2) - (\Sigma x_i)^2\right|}$$

x_i is the difference between the RM and M in lb/10^6 Btu

$$= \frac{2.306}{9\sqrt{9-1}}\sqrt{\left|9(0.2893) - 2.528\right|}$$

$$= 0.0249$$

relative accuracy:

$$= \frac{|\bar{x}| + C.I._{95}}{SO_2,\ \text{lb}/10^6 \text{ Btu (avg ref. method value)}} \times 100$$

$$= \left(\frac{0.18 + .0249}{2.13}\right) \times 100$$

$$= 9.62\%$$

RELATIVE ACCURACY DETERMINATION

Outlet

Run Number	Date	SO_2 (ppm,wet) Reference Method	SO_2 (ppm,wet) Monitor Chart	SO_2 (ppm,wet) Monitor Dart	H_2O (%) Reference Method	O_2 (%, wet) Reference Method	O_2 (%, wet) Monitor Chart	O_2 (%, wet) Monitor Dart	SO_2 ($lb/10^6$ Btu) Reference Method	SO_2 ($lb/10^6$ Btu) Monitor Chart	SO_2 ($lb/10^6$ Btu) Monitor Dart	SO_2 ($lb/10^6$ Btu) Difference Chart	SO_2 ($lb/10^6$ Btu) Difference Dart
1	1/27/81	754	851	853	14.20	5.83	4.98	4.98	2.16	2.28	2.28	-0.12	-0.12
2	1/27/81	826	975	960	14.30	5.67	-	-	2.34	-	-	-	-
3	1/27/81	815	424	907	14.70	5.92	5.57	5.57	2.37	2.61	2.57	-0.24	-0.20
4	1/27/81	801	882	874	13.85	5.96	5.77	5.77	2.31	2.50	2.48	-0.19	-0.17
5	1/27/81	799	870	871	14.71	5.79	5.62	5.62	2.30	2.47	2.48	-0.17	-0.18
6	1/27/81	784	878	872	14.46	5.83	5.47	5.47	2.26	2.45	2.44	-0.19	-0.18
7	1/28/81	611	807	662	14.80	4.50	5.26	5.26	1.59	2.23	1.83	-0.64	-0.24
8	1/28/81	578	788	647	14.52	7.5	5.34	5.34	1.93	2.18	1.[illegible]	-0.25	+0.14
9	1/28/81	659	758	752	14.85	5.5	4.74	4.74	1.86	2.01	2.00	-0.15	-0.14
10	1/28/81	683	758	747	14.62	5.33	5.40	5.40	1.89	2.11	2.08	-0.22	-0.19
11	1/28/81	719	810	803	13.61	5.08	4.91	4.91	1.92	2.14	2.12	-0.22	-0.20
12	1/28/81	777	870	864	14.83	5.00	4.92	4.92	2.11	2.34	2.33	-0.23	-0.22
										Σx_1		-1.73	-1.60
										Σx_1^2		.3453	.2893
									Average	2.13		-0.19	-0.18
									Confidence Interval			0.0307	0.0249
									Accuracy			10.36%	9.62%

RELATIVE ACCURACY DETERMINATION

Inlet

Run Number	Date	SO_2 (ppm, wet) Reference Method	SO_2 (ppm, wet) Monitor Chart	SO_2 (ppm, wet) Monitor Dart	H_2O (%) Reference Method	O_2 (%, wet) Reference Method	O_2 (%, wet) Monitor Chart	O_2 (%, wet) Monitor Dart	SO_2 (lb/10^6 Btu) Reference Method	SO_2 (lb/10^6 Btu) Monitor Chart	SO_2 (lb/10^6 Btu) Monitor Dart	SO_2 (lb/10^6 Btu) Difference Chart	SO_2 (lb/10^6 Btu) Difference Dart
14	1/28/81	2475	2800	2809	8.08	6.08	5.43	5.43	6.54	7.05	7.07	-0.51	-0.53
15	1/28/81	2326	2760	2745	7.58	6.33	5.80	5.80	6.21	7.08	7.05	-0.87	-0.84
16	1/29/81	2353	2648	2649	7.93	6.67	5.76	5.76	6.49	6.81	6.82	-0.32	-0.33
17	1/29/81	2444	2648	2645	7.55	6.17	5.67	5.67	6.45	6.73	6.72	-0.28	-0.27
18	1/29/81	2520	2660	2652	6.70	6.50	5.64	5.64	6.72	6.66	6.64	+0.06	+0.08
19	1/29/81	2437	2592	2571	7.27	7.33	5.85	5.85	7.02	6.65	6.59	+0.37	+0.42
20	1/29/81	2433	2660	2651	7.66	6.42	5.78	5.78	6.55	6.83	6.80	-0.28	-0.25
21	1/29/81	2397	2640	2636	7.35	6.33	5.88	5.88	6.38	6.79	6.78	-0.41	-0.40
22	1/29/81	2397	2629	2616	7.18	6.50	5.97	5.97	6.45	6.77	6.76	-0.32	-0.31
23	1/29/81	2348	2620	2602	7.30	6.58	5.95	5.95	6.37	6.77	6.72	-0.40	-0.35
24	1/29/81	2424	2620	2625	7.53	7.00	5.78	5.78	6.82	6.71	6.72	+0.11	+0.10
25	1/29/81	2412	2640	2639	7.91	6.75	5.83	5.83	6.70	6.83	6.82	-0.13	-0.12
										Σx_1		-1.19	-1.03
										Σx_1^2		.6911	0.6701
								$\bar{x}_1$	Average	6.62		-0.13	-0.11
								$C.I._{95}$	Confidence Interval Interval			0.199	0.202
									Accuracy			4.97	4.71

CALIBRATION ERROR DETERMINATION:

Test Data (Inlet SO_2, DART recorder, high-level gas)

Run No.	Calibration Gas Conc. ppm	Instrument Reading ppm	Difference (Cal.-Inst.)	x^2
2	3443	3380	63	3969
5	3443	3390	53	2809
7	3443	3405	38	1444
10	3443	3400	43	1849
14	3443	3395	48	2304
			$\Sigma x_i = 245$	$\Sigma x_i^2 = 12375$

absolute mean value $|\bar{x}|$:

$$|\bar{x}| = \frac{1}{n} \sum_{i=1}^{n} x_i$$

$$= \frac{1}{5} (245) = 49.00$$

95% confidence interval ($C.I._{95}$):

$$C.I._{95} = \frac{t_{0.975}}{n\sqrt{n-1}} \sqrt{n\ (\Sigma x_i^2) - (\Sigma x_i)^2}$$

$$(t_{0.975,5} = 2.776)$$

$$= \frac{2.776}{5\sqrt{5-1}} \sqrt{|5(12375) - (245)^2|}$$

$$= 11.940$$

calibration error:

$$= \frac{|\bar{x}| + C.I._{95}}{[SO_2]\ ppm} \times 100$$

$$= \frac{49.00 + 11.940}{3443} \times 100$$

$$= \underline{1.8\%}$$

CALIBRATION ERROR DETERMINATION

Inlet O_2 - Dart

Run No.	Calibration Gas Concentration[a] %	Measurement System Reading %	Arithmetic Differences %	
	A	B	A-B	
			Mid	High
1	0	.03		
2	8.0	7.7	.3	
3	20.9	20.5		.4
4	8.0	7.92	.08	
5	0	.02		
6	8.0	7.72	.28	
7	20.9	20.5		.4
8	0	.01		
9	20.9	20.5		.4
10	8.0	7.89	.11	
11	0	.03		
12	20.9	20.5		.4
13	8.0	7.87	.13	
14	20.9	20.5		.4
15	0	.03		
Arithmetic Mean[b] =			.18	.4
Confidence Interval[b] =			.127	0.0
Calibration Error[b,c] =			3.8	1.9

[a] Calibration Data

Mid-level: C = 8.0 %

High-level: D = 20.9 %

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Inlet O_2 - Chart

Run No.	Calibration Gas Concentration[a] %	Measurement System Reading %	Arithmetic Differences %	
	A	B	A-B	
			Mid	High
1	0	.04		
2	8.0	7.84	.16	
3	20.9	20.6		.3
4	8.0	7.94	.06	
5	0	.05		
6	8.0	7.84	.16	
7	20.9	20.7		.2
8	0	.04		
9	20.9	20.7		.2
10	8.0	7.94	.06	
11	0	.04		
12	20.9	20.7		.2
13	8.0	7.94	.06	
14	20.9	20.7		.2
15	0	.04		
Arithmetic Mean[b] =			0.10	0.22
Confidence Interval[b] =			0.68	.056
Calibration Error[b,c] =			2.1	1.3

[a] Calibration Data

Mid-level: C = 8.0 %

High-level: D = 20.9%

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Inlet SO_2 - Dart

Run No.	Calibration Gas Concentration[a] ppm	Measurement System Reading ppm	Arithmetic Differences ppm A-B	
	A	B	Mid	High
1	0	5.00		
2	3443	3380		63
3	0	10.0		
4	2033	2080	-47	
5	3443	3390		53
6	0	20		
7	3743	3405		38
8	2033	2085	-52	
9	0	10		
10	3443	3400		43
11	2033	2080	-47	
12	0	20		
13	2033	2085	-52	
14	3443	3395		48
15	2033	2080	-47	
Arithmetic Mean[b] =			-49	49
Confidence Interval[b] =			3.400	11.940
Calibration Error[b,c] =			2.6	1.8

[a] Calibration Data

Mid-level: C = 2033 ppm

High-level: D = 3443 ppm

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Inlet SO_2 - Chart

Run No.	Calibration Gas Concentration[a] ppm	Measurement System Reading ppm	Arithmetic Differences ppm	
	A	B	A-B	
			Mid	High
1	0	-8.0		
2	3443	3384		59
3	0	-12		
4	2033	2080	-47	
5	3443	3392		51
6	0	20		
7	3443	3400		43
8	2033	2092	-59	
9	0	16		
10	3443	3400		43
11	2033	2080	-47	
12	0	24		
13	2032	2092	-59	
14	3443	3400		43
15	2033	2080	-47	
Arithmetic Mean[b] =			-51.8	47.8
Confidence Interval[b] =			8.2	8.9
Calibration Error[b,c] =			3.0	1.6

[a] Calibration Data

Mid-level: C = 2033 ppm

High-level: D = 3443 ppm

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Outlet O_2 - Dart

Run No.	Calibration Gas Concentration[a] %	Measurement System Reading %	Arithmetic Differences %	
	A	B	A-B	
			Mid	High
1	0	.02		
2	9.6	9.35	.25	
3	20.9	20.5		.4
4	0	.03		
5	20.9	20.5		.4
6	9.6	9.6	0	
7	20.9	20.5		.4
8	0	.06		
9	9.6	9.4	.2	
10	0	.03		
11	20.9	20.5		.4
12	9.6	9.51	.09	
13	0	.06		
14	20.9	20.5		.4
15	9.6	9.5	.1	
Arithmetic Mean[b] =			.128	0.4
Confidence Interval[b] =			.122	0.0
Calibration Error[b,c] =			2.6	1.9

[a] Calibration Data

Mid-level: C = 9.6 %

High-level: D = 20.9 %

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Outlet O_2 - Chart

Run No.	Calibration Gas Concentration[a] %	Measurement System Reading %	Arithmetic Differences %	
	A	B	A-B	
			Mid	High
1	0	.05		
2	9.6	9.41	.19	
3	20.9	20.6		.3
4	0	.06		
5	20.9	20.6		.3
6	9.6	9.51	.09	
7	20.9	20.6		.3
8	0	.06		
9	0	9.41	.19	
10	0	.06		
11	20.9	20.6		.3
12	9.6	9.53	.07	
13	0	.06		
14	20.9	20.6		.3
15	9.6	9.53	.07	
Arithmetic Mean[b] =			.122	.3
Confidence Interval[b] =			.078	0
Calibration Error[b,c] =			2.1	1.4

[a] Calibration Data

Mid-level: C = 9.6 %

High-level: D = 20.9 %

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Outlet SO_2 - Dart

Run No.	Calibration Gas Concentration[a] ppm	Measurement System Reading ppm	Arithmetic Differences ppm	
	A	B	A-B	
			Mid	High
1	1282	1275		7
2	0	-9		
3	746	736	10	
4	1282	1269		13
5	0	1.2		
6	1282	1264		18
7	746	752	-6	
8	1282	1262		20
9	0	-.02		
10	746	740	6	
11	0	-7		
12	746	738	8	
13	1282	1269		13
14	0	-.02		
15	746	741	5	
Arithmetic Mean[b] =			4.6	14.2
Confidence Interval[b] =			7.7	6.29
Calibration Error[b,c] =			1.6	1.6

[a] Calibration Data

Mid-level: C = 746 ppm

High-level: D = 1282 ppm

[b] See Performance Specification 2

[c] Use C or D as R. V.

CALIBRATION ERROR DETERMINATION

Outlet SO_2 - Chart

Run No.	Calibration Gas Concentration[a]	Measurement System Reading	Arithmetic Differences	
	A	B	A-B	
			Mid	High
1	1282	1280		2
2	0	-1.5		
3	746	743	3	
4	1282	1277		5
5	0	3.0		
6	1282	1272		10
7	746	744	2	
8	1282	1271		11
9	0	0.0		
10	746	744	2	
11	0	-3.0		
12	746	743	3	
13	1282	1274		8
14	0	4.5		
15	746	743	3	
Arithmetic Mean[b] =			2.6	7.2
Confidence Interval[b] =			.680	4.595
Calibration Error[b,c] =			0.4	0.9

[a] Calibration Data

Mid-level: C = 746 ppm

High-level: D = 1282 ppm

[b] See Performance Specification 2

[c] Use C or D as R. V.

RESPONSE TIME

O_2 S-1 Inlet

DATE: 2/25/81

SPAN VALUE: 22.0

1% SPAN VALUE: .22

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	2.03	3.52
2	2.00	1.02
3	2.03	1.52
ave.	2.02	2.02

SYSTEM RESPONSE TIME (SLOWER OF Ave.) = 2.02 MIN.

RESPONSE TIME

SO_2 S-1 Inlet

DATE: 2/25/81

SPAN VALUE: 4000 ppm

1% SPAN VALUE: 40 ppm

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	1.30	2.48
2	1.02	2.00
3	3.53	2.03
ave.	1.62	2.17

SYSTEM RESPONSE TIME (SLOWER OF AVE.) = 2.17 MIN. DOWNSCALE

RESPONSE TIME

O_2 S-1 Outlet

DATE: 2/25/81

SPAN VALUE: 22%

1% SPAN VALUE: .22

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	2.52	2.52
2	3.52	2.52
3	3.53	2.00
ave.	3.19	2.34

SYSTEM RESPONSE TIME (SLOWER OF AVE.) = 3.19 MIN. UPSCALE

RESPONSE TIME

SO_2 S-1 Outlet

DATE: 2/25/81

SPAN VALUE: 1500 ppm
1% SPAN VALUE: 15 ppm

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	3.52	2.02
2	4.33	1.00
3	2.52	1.52
Ave.	3.46	1.51

SYSTEM RESPONSE TIME (SLOWER OF AVE.)= 3.46 MIN. UPSCALE

RESPONSE TIME

S-2 Inlet O_2

DATE: 1/26/81

HIGH-RANGE = ~20.9 ppm

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	1.50	1.20
2	1.05	1.20
3	2.25	1.80
Ave.	A = 1.60	B = 1.40

SYSTEM RESPONSE TIME (SLOWER OF A & B) = 1.60 MIN. UPSCALE

RESPONSE TIME

S-2 Outlet O_2

DATE: 1/26/81

HIGH-RANGE = 20.9 ppm

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	2.25	2.55
2	1.35	1.65
3	1.95	2.55
Ave.	A = 1.85	B = 2.25

SYSTEM RESPONSE TIME (SLOWER OF A & B)= 2.25 MIN. DOWNSCALE

RESPONSE TIME

S-2 Inlet SO_2

DATE: 1/26/81

HIGH-RANGE = ∿3300 ppm

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	1.20	1.35
2	3.00	1.05
3	1.80	2.25
Ave.	A = 2.00	B = 1.55

SYSTEM RESPONSE TIME (SLOWER OF A & B)= 2.00 MIN. UPSCALE

RESPONSE TIME

S-2 Outlet SO_2

DATE: 1/26/81

HIGH-RANGE = ∿1300 ppm

TEST RUN	UPSCALE (Min)	DOWNSCALE (Min)
1	1.20	1.65
2	1.20	1.50
3	1.35	1.20
Ave.	A = 1.25	B = 1.45

SYSTEM RESPONSE TIME (SLOWER OF A & B)= 1.45 MIN. DOWNSCALE

INLET O_2

ZERO AND CALIBRATION DRIFT (2-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING.				SPAN DRIFT		CALIBRATION DRIFT	
				DART		RECORDER				DART		RECORDER					
		BEGIN	END	INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R	DART $C_D=B_D-A_D$	RECORDER $C_R=B_R-A_R$	INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R	DART $F_D=E_D-D_D$	RECORDER $F_R=E_R-D_R$	DART $G_D=F_D-C_D$	RECORDER $G_R=F_R-C_R$
1	1/30/81	1242	1453	0.0	0.03	0.1%	0.3%	0.03	0.2%	20.87	20.87	100.4%	100.8%	0	0.4%	-0.03	0.2%
2	1/30/81	1453	1713	0.03	0.02	0.3%	0.3%	-0.01	0	20.87	20.82	100.8%	100.0%	-0.05	-0.8%	-0.04	-0.8%
3	1/30/81	1713	1918	0.02	0.0	0.3%	0%	-0.02	-0.3%	20.82	20.8	100.0%	100.2%	-0.02	0.2%	0	0.5%
4	1/30/81	1918	2122	0.0	0.03	0%	0%	0.03	0%	20.8	20.9	100.2%	100.2%	0.1	0	0.07%	0%
5	1/30/81	2122	2339	0.03	0.0	0%	0.3%	-0.03	0.3%	20.9	20.9	100.2%	100.2%	0	0	0.03	-0.3%
6	1/30/81	2339	0143	0.0	0.0	0.3%	0.3%	0	0	20.9	20.9	100.2%	100.2%	0	0	0	0
7	1/31/81	0532	0742	-0.02	0.0	0.3%	0.3%	0.02	0	20.9	20.9	100.2%	100.2%	0	0	-0.02	0
8	1/31/81	0742	0954	0.0	0.0	0.3%	0.2%	0	-0.1%	20.9	20.6	100.2%	99.7%	-0.3	-0.5%	-0.3	-0.4%
9	1/31/81	0954	1210	0.0	0.0	0.2%	0.3%	0	0.1%	20.6	20.7	99.7%	99.7%	0.1	0%	0.1	-0.1%
10	1/31/81	1317	1627	0.0	0.0	0.3%	0.3%	0	0%	20.56	20.74	99.0%	100.3%	0.18	1.3%	0.18	1.3%
11	1/31/81	1627	1841	0.0	0.0	0.3%	0.4%	0	0.1%	20.74	20.75	100.3%	100.3%	0.01	0%	0.01	-0.1%
12	2/1/81	1427	1646	0.0	0.02	0.3%	0.2%	0.02	-0.1%	20.80	20.80	100.5%	100.3%	0	-0.2%	-0.02	-0.1%
13	2/1/81	1844	2059	0.0	0.0	0.3%	0.2%	0	-0.1%	20.51	20.50	99.2%	99.2%	-0.01	0	-0.01	0.1%
14	2/1/81	2059	2330	0.0	0.0	0.2%	0.2%	0	0	20.50	20.7	99.2%	100.3%	0.2	1.1%	0.2	1.1%
15	2/1/81	2330	0154	0.0	0.0	0.2%	0.2%	0	0	20.7	20.7	100.3%	100.1%	0	-0.2%	0	-0.2%
ARITHMETIC MEAN (EQ. 2-1, FROM PERFORMANCE SPECIFICATION 2)								0.0027	0.007							0.011	0.08
CONFIDENCE INTERVAL (EQ. 2-2, FROM PERFORMANCE SPEC. 2)								0.0092	0.077							0.06	0.17
$\lvert\bar{x}\rvert$ + C.I.95								0.0119	0.084							0.074	0.30
ZERO DRIFT (% OF SPAN* VALUE)								0.06	0.084	CALIBRATION DRIFT (% OF SPAN)						0.35	0.30

*SPAN VALUES: 20.9%, DART; 100%, CHART

INLET SO_2

ZERO AND CALIBRATION DRIFT (2-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING				SPAN DRIFT		CALIBRATION DRIFT	
		BEGIN	END	DART		RECORDER		DART $C_D=B_D-A_D$	RECORDER $C_R=B_R-A_R$	DART		RECORDER		DART $F_D=E_D-D_D$	RECORDER $F_R=E_R-D_R$	DART $G_D=F_D-C_D$	RECORDER $G_R=F_R-C_R$
				INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R			INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R				
1	1/30/81	1242	1453	5	5	0.2%	0.1%	0	-0.1%	3270	3280	82.0%	82.0%	10	0	10	0.1%
2	1/30/81	1453	1713	5	-10	0.1%	0%	-15	-0.1%	3280	3245	82.0%	81.0%	-35	-1.0%	-20	-0.9%
3	1/30/81	1713	1918	-10	0	0	0	10	0	3245	3270	81.0%	82.0%	25	1.0%	15	1.0%
4	1/30/81	1918	2122	0	5	0	0.1%	5	0.1%	3270	3310	82.0%	82.0%	40	0	35	-0.1%
5	1/30/81	2122	2339	5	5	0.1%	0.1%	0	0	3310	3255	82.0%	81.7%	-55	-0.3%	-55	-0.3%
6	1/30/81	2339	0143	5	5	0.1%	0.1%	0	0	3255	3295	91.7%	82.5%	40	0.8%	40	0.8%
7	1/31/81	0532	0742	-15	15	-0.5%	0.5%	30	1.0%	3245	3250	81.5%	81.5%	5	0%	-25	-1.0%
8	1/31/81	0742	0954	15	0	0.5%	0.2%	-15	-0.3%	3250	3235	81.5%	80.8%	-15	-0.7%	0	-0.4%
9	1/31/81	0954	1210	0	-10	0.2%	0%	-10	-0.2%	3235	3220	80.8%	80.3%	-15	-0.5%	-5	-0.3%
10	1/31/81	1317	1627	5	0	0.2%	0.3%	-5	0.1%	3220	3210	80.5%	80.3%	-10	-0.2%	-5	-0.3%
11	1/31/81	1627	1841	0	0	0.3%	0.3%	0	0	3210	3205	80.3%	80.5%	-5	0.2%	-5	0.2%
12	2/1/81	1427	1646	30	25	0.5%	0.4%	-5	-0.1%	3215	3230	80.7%	80.9%	15	0.2%	20	0.3%
13	2/1/81	1844	2059	50	30	1.2%	0.8%	-20	-0.4%	3350	3340	83.8%	83.6%	-10	-0.2%	10	0.2%
14	2/1/81	2059	2330	30	30	0.8%	0.8%	0	0	3340	3370	83.6%	84.3%	30	0.7%	30	0.7%
15	2/1/81	2330	0154	30	0	0.8%	0.3%	-30	-0.5%	3370	3340	84.3%	83.7%	-30	-0.0%	0	-0.1%
ARITHMETIC MEAN (EQ. 2-1, FROM PERFORMANCE SPECIFICATION 2)								-3.7	-0.033							3.0	-0.007
CONFIDENCE INTERVAL (EQ. 2-2, FROM PERFORMANCE SPEC. 2)								7.7	0.19							13.7	0.32
$\lvert\bar{x}\rvert + C.I._{95}$								11.4	0.22							16.7	0.32
ZERO DRIFT (% OF SPAN* VALUE)								0.29	0.22	CALIBRATION DRIFT (% OF SPAN)						0.42	0.32

* SPAN VALUES: 4000 ppm, DART; 100 %, CHART RECORDER

OUTLET O_2

ZERO AND CALIBRATION DRIFT (2-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING.				SPAN DRIFT		CALIBRATION DRIFT	
				DART		RECORDER				DART		RECORDER					
		BEGIN	END	INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R	DART $C_D=B_D-A_D$	RECORDER $C_R=B_R-A_R$	INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R	DART $F_D=E_D-D_D$	RECORDER $F_R=E_R-D_R$	DART $G_D=F_D-C_D$	RECORDER $G_R=F_R-C_R$
1	1/30/81	1252	1459	0.06	0.03	0.3%	0.3%	-0.03	0	22.18	21.92	Peg	Peg	-0.26	—	-0.23	—
2	1/30/81	1459	1723	0.03	0.06	0.3%	0.3%	0.03	0	21.92	22.05	Peg	Peg	0.13	—	0.10	—
3	1/30/81	1723	1930	0.06	0.06	0.3%	0.3%	0	0	22.05	21.9	Peg	Peg	-0.15	—	-0.15	—
4	1/30/81	1930	2145	0.06	0.06	0.3%	0.3%	0	0	21.9	22.7	Peg	Peg	0.8	—	0.8	—
5	1/30/81	2145	0006	0.06	0.03	0.3%	0.3%	-0.03	0	22.7	22.7	Peg	Peg	0	—	0.03	—
6	1/31/81	0006	0225	0.03	0.03	0.3%	0.4%	0	0.1%	22.7	22.7	Peg	Peg	0	—	0	—
7	1/31/81	0553	0801	0.03	0.03	0.4%	0.3%	0	-0.1%	22.2	22.7	Peg	Peg	0.5	—	0.5	—
8	1/31/81	0801	1011	0.03	0.00	0.3%	0.3%	-0.03	0	22.7	22.5	Peg	Peg	-0.2	—	-0.17	—
9	1/31/81	1011	1219	0.00	0.03	0.3%	0.5%	0.03	0.2%	22.5	22.3	Peg	Peg	-0.2	—	-0.23	—
10	1/31/81	1421	1636	0.03	0.03	0.4%	0.3%	0	-0.1%	22.4	22.3	Peg	Peg	-0.1	—	-0.1	—
11	1/31/81	1636	1852	0.03	0.06	0.3%	0.3%	0.03	0	22.3	22.2	Peg	Peg	-0.1	—	-0.13	—
12	2/1/81	1442	1702	0.03	0.06	0.3%	0.3%	0.03	0	22.34	22.23	Peg	Peg	-0.11	—	-0.14	—
13	2/1/81	1811	2045	0.06	0.06	0.3%	0.3%	0	0	22.3	22.1	Peg	Peg	-0.2	—	-0.2	—
14	2/1/81	2045	2308	0.06	0.06	0.3%	0.3%	0	0	22.1	22.4	Peg	Peg	0.3	—	0.3	—
15	2/1/81	2308	0133	0.06	0.03	0.3%	0.2%	-0.03	-0.1%	22.4	22.5	Peg	Peg	0.1	—	0.13	—
ARITHMETIC MEAN (EQ. 2-1, FROM PERFORMANCE SPECIFICATION 2)								0	0							0.031	—
CONFIDENCE INTERVAL (EQ. 2-2, FROM PERFORMANCE SPEC. 2)								0.0126	0.0419							0.16	—
$\lvert\bar{x}\rvert$ + C. I.$_{.95}$								0.0126	0.0419							0.19	—
ZERO DRIFT (% OF SPAN* VALUE)								0.06	0.042	CALIBRATION DRIFT (% OF SPAN)						0.93	—

*SPAN VALUES: 20.9%, DART; 100% CHART

OUTLET SO_2

ZERO AND CALIBRATION DRIFT (2-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING.				SPAN DRIFT		CALIBRATION DRIFT	
		BEGIN	END	DART		RECORDER		DART $C_D=B_D-A_D$	RECORDER $C_R=B_R-A_R$	DART		RECORDER		DART $F_D=E_D-D_D$	RECORDER $F_R=E_R-D_R$	DART $G_D=F_D-C_D$	RECORDER $G_R=F_R-C_R$
				INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R			INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R				
1	1/30/81	1252	1459	22	11	1.6%	1.0%	-11	-0.0%	1282	1267	86.6%	85.0%	-15	-1.6%	-4	-1.0%
2	1/30/81	1459	1723	11	-1.4	1.0%	0.5%	-12.4	-0.5%	1267	1247	85.0%	84.0%	-20	-1.0%	-7.6	-0.5%
3	1/30/81	1723	1930	-1.4	2	0.5%	0.3%	3.4	-0.2%	1247	1250	84.0%	83.2%	3	-0.8%	-0.4	-0.6%
4	1/30/81	1930	2145	2	9.5	0.3%	0.7%	7.5	0.4%	1250	1307	83.2%	87.3%	57	4.1%	50	3.7%
5	1/30/81	2145	0006	9.5	20.5	0.7%	1.7%	11	1.0%	1307	1338	87.3%	89.5%	31	2.2%	20	1.2%
6	1/31/81	0006	0225	20.5	-10.6	1.7%	-0.5%	-31.1	-2.2%	1338	1296	89.5%	86.8%	-42	-2.7%	-11	-0.5%
7	1/31/81	0553	0801	18.7	-17.9	1.5%	-1.0%	-36.6	-2.5%	1276	1280	85.3%	85.7%	4	0.4%	41	2.9%
8	1/31/81	0801	1011	-17.9	5	-1.0%	0.3%	22.9	1.3%	1280	1242	85.7%	83.0%	-38	-2.7%	-61	-4.0%
9	1/31/81	1011	1219	5	-6	0.3%	0%	-11	-0.3%	1242	1230	83.0%	82.5%	-12	-0.5%	-1	-0.2%
10	1/31/81	1421	1636	10	10	0.4%	0.3%	0	-0.1%	1270	1265	85.2%	84.5%	-5	-0.7%	-5	-0.6%
11	1/31/81	1636	1852	10	10	0.3%	1.0%	0	0.7%	1265	1250	84.5%	84.3%	-15	-0.2%	-15	-0.7%
12	2/1/81	1442	1702	27	26	0.7%	0.9%	-1	0.2%	1324	1322	85.6%	85.5%	-2	-0.1%	-1	-0.3%
13	2/1/81	1811	2045	10	15	0.3%	0.4%	-5	0.1%	1292	1292	83.6%	83.5%	0	-0.1%	5	-0.2%
14	2/1/81	2045	2308	15	18.8	0.4%	0.4%	3.8	0	1292	1322	83.5%	85.4%	30	1.9%	26	1.9%
15	2/1/81	2308	0133	18.8	13.1	0.4%	0.3%	-5.7	-0.1%	1322	1293	85.4%	83.5%	-29	-1.9%	-23	-1.8%
ARITHMETIC MEAN (EQ. 2-1, FROM PERFORMANCE SPECIFICATION 2)								-4.3	-0.19							0.87	-0.06
CONFIDENCE INTERVAL (EQ. 2-2, FROM PERFORMANCE SPEC. 2)								8.4	0.57							14.8	1.04
$\lvert\bar{X}\rvert + C.I_{95}$								12.7	0.76							15.7	1.10
ZERO DRIFT (% OF SPAN* VALUE)								0.85	0.76	CALIBRATION DRIFT (% OF SPAN)						1.0	1.1

*SPAN VALUES: 1500 ppm DART; 100% CHART

INLET O_2

ZERO AND CALIBRATION DRIFT (24-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING				SPAN DRIFT		CALIBRATION DRIFT	
				DART		RECORDER				DART		RECORDER					
		BEGIN	END	INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R	DART $C_D=B_D-A_D$	RECORDER $C_R=B_R-A_R$	INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R	DART $F_D=E_D-D_D$	RECORDER $F_R=E_R-D_R$	DART $G_D=F_D-C_D$	RECORDER $G_R=F_R-C_R$
1	2/5/81	1740	1942(2/6)	-0.21	-0.20	0%	-0.1%	0.01	-0.1%	20.75	20.25	100%	98.5%	-0.50	-1.5%	-0.51	-1.4%
2	2/7/81	1132	1205(2/8)	-0.20	-0.24	0%	-0.2%	-0.04	-0.2%	19.55	19.57	95.2%	95.3%	0.02	0.1%	0.06	0.3%
3	2/8/81	1503	1619(2/9)	-0.03	-0.00	-0.2%	-0.1%	0.03	0.1%	21.0	20.6	95.1%	93.6%	-0.4	-1.5%	-0.43	-1.6%
4	2/9/81	1708	1826(2/10)	0.00	-0.00	-0.1%	-0.1%	0	0	21.05	21.09	95.6%	95.7%	0.04	0.1%	0.04	0.1%
5	2/24/81	0854	1148(2/25)	-0.03	0.00	-0.2%	0%	0.03	0.2%	20.86	20.6	94.7%	93.6%	-0.26	-1.1%	-0.29	-1.3%
6	2/25/81	1223	1441	0.00	0.00	0%	0.3%	0	0.3%	20.83	20.94	94.7%	94.5%	0.11	-0.2%	0.11	-0.5%
7	2/26/81	1505	1550	0.00	0.00	0.3%	0.5%	0	0.2%	20.94	20.72	94.5%	94.0	-0.22	-0.5%	-0.22	-0.7%
ARITHMETIC MEAN (EQ. 2-1, FROM P.S. 2)								0.004	0.071							-0.178	-0.73
CONFIDENCE INTERVAL (EQ. 2-2, FROM P.S. 2)								0.022	0.166							0.23	0.69
$\lvert\bar{x}\rvert$ + C.I.95								0.026	0.24							0.408	1.42
ZERO DRIFT (% OF SPAN* VALUE)								0.12	0.25	CALIBRATION DRIFT (% OF SPAN)						1.95	1.49

*SPAN VALUES: 20.9%, DART; 95%, CHART

INLET SO_2

ZERO AND CALIBRATION DRIFT (24-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING				SPAN DRIFT		CALIBRATION DRIFT	
		BEGIN	END	DART		RECORDER		DART $C_D=B_D-A_D$	RECORDER $C_R=B_R-A_R$	DART		RECORDER		DART $F_D=E_D-D_D$	RECORDER $F_R=E_R-D_R$	DART $G_D=F_D-C_D$	RECORDER $G_R=F_R-C_R$
				INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R			INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R				
1	1/30/81	1252	1317(1/31)	5	-5	0.2%	0.0%	-10	-0.2%	3270	3220	82.0%	80.5%	-50	-1.5	-40	-1.3%
2	1/31/81	1627	1646(2/1)	0	25	0.3%	0.4%	25	0.1%	3210	3230	80.3%	80.9%	20	0.6%	-5	0.5%
3	2/1/81	1844	1823(2/2)	50	20	1.2%	0.5%	-30	-0.7%	3350	3395	83.8%	85.2%	45	1.4%	75	2.1%
4	2/2/81	1833	1946(2/3)	20	45	0.5%	1.5%	25	1.0%	3295	3300	82.5%	82.5%	5	0%	-20	-1.0%
5	2/4/81	2127	2155(2/5)	15	7	0.8%	1.0%	-8	0.2%	3290	3285	82.7%	82.7%	-5	0	3	-0.2%
6	2/6/81	1458	1624(2/7)	4.6	15	0%	0.6%	10	0.6%	3348	3260	82.5%	82.1%	-88	-0.4%	-98	-1.0%
7	2/7/81	1659	1731(2/8)	-15	-10	0.4%	0.1%	5	-0.3%	3300	3325	82.3%	83.2%	25	0.9%	20	1.2%
ARITHMETIC MEAN (EQ. 2-1, FROM P.S. 2)								2.4	0.10							-9.3	0.04
CONFIDENCE INTERVAL (EQ. 2-2, FROM P.S. 2)								18.5	0.53							49.3	1.18
$\lvert\bar{x}\rvert$ + CI.95								20.9	0.63							58.6	1.2
ZERO DRIFT (% OF SPAN* VALUE)								0.52	0.63	CALIBRATION DRIFT (% OF SPAN)						1.5	1.2

*SPAN VALUES: 400 ppm, DART; 100%, CHART

$$\frac{2.447}{7\sqrt{6}}\sqrt{7(2431) - 23}$$

OUTLET O_2

ZERO AND CALIBRATION DRIFT (24-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING				SPAN DRIFT		CALIBRATION DRIFT	
				DART		RECORDER		DART $C_D = B_D - A_D$	RECORDER $C_R = B_R - A_R$	DART		RECORDER		DART $F_D = E_D - D_D$	RECORDER $F_R = E_R - D_R$	DART $G_D = F_D - C_D$	RECORDER $G_R = F_R - C_R$
		BEGIN	END	INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R			INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R				
1	2/5/81	1730	1940(2/6)	-0.18	-0.15	0%	0%	0.03	0	20.80	20.63	99.7.%	100.0%	-0.17	0.3%	-0.20	0.3%
2	2/7/81	1115	1205(7/8)	-0.18	-0.18	0%	0%	0	0	19.46	19.58	94.3%	94.9%	0.12	0.6%	0.12	0.6%
3	2/8/81	1505	1632(8/9)	0.00	0.13	0%	0.1%	0.13	0.1%	20.86	20.84	94.7%	94.7%	-0.02	0%	-0.15	-0.1%
4	2/9/81	1632	1829(9/10)	0.13	0.01	0.1%	0.1%	-0.12	0%	20.84	20.60	94.7%	93.6%	-0.24	-1.1%	-0.12	-1.1%
5	2/24/81	0857	1134	0.00	0.01	0.1%	0.2%	0.01	0.1%	21.06	20.95	95.7%	95.3%	-0.11	-0.4%	-0.12	-0.5%
6	2/25/81	1134	1436	0.01	0.02	0.2%	0.4%	0.01	0.2%	20.95	20.97	95.3%	95.2%	0.02	-0.1%	0.01	-0.3%
7	2/26/81	1540	1555	0.02	0.00	0.4%	0.5%	-0.02	0.1%	20.97	20.9	95.2%	95%	-0.07	-0.2%	-0.05	-0.3%
ARITHMETIC MEAN (EQ. 2-1, FROM P.S. 2)								0.006	0.071							-0.07	-0.2
CONFIDENCE INTERVAL (EQ. 2-2, FROM P.S. 2)								0.068	0.07							0.10	0.51
$\lvert\bar{x}\rvert$ + C.I.95								0.074	0.14							0.17	0.71
ZERO DRIFT (% OF SPAN* VALUE)								0.35	0.15	CALIBRATION DRIFT (% OF SPAN)						0.8	0.75

SPAN VALUES: 20.9 %, DART; 95%, CHART

OUTLET SO_2

ZERO AND CALIBRATION DRIFT (24-HOUR)

DATA SET NUMBER	DATE	TIME		ZERO READING				ZERO DRIFT		HIGH-RANGE READING				SPAN DRIFT		CALIBRATION DRIFT	
				DART		RECORDER				DART		RECORDER					
		BEGIN	END	INITIAL A_D	FINAL B_D	INITIAL A_R	FINAL B_R	DART $C_D = B_D - A_D$	RECORDER $C_R = B_R - A_R$	INITIAL D_D	FINAL E_D	INITIAL D_R	FINAL E_R	DART $F_D = E_D - D_D$	RECORDER $F_R = E_R - D_R$	DART $G_D = F_D - C_D$	RECORDER $G_R = F_R - C_R$
1	1/30/81	1255	1343(1/31)	22	8	1.6%	0.8%	-14	-0.8%	1282	1245	86.6%	83.2%	-37	-3.4%	-23	-2.6%
2	1/31/81	1637	1702(2/1)	10	26	0.3%	0.9%	16	0.6%	1260	1322	84.5%	85.5%	62	1.0%	46	0.4%
3	2/1/81	1811	1849(2/2)	10	4	0.3%	0.7%	-6	0.4%	1292	1260	83.5%	84.7%	-32	1.2%	-26	0.8%
4	2/2/81	1844	2023(2/3)	4	22	0.7%	2.0%	18	1.3%	1260	1280	84.7%	85.8%	20	1.1%	2	-0.2%
5	2/4/81	2143	2205(2/5)	4	4	0.6%	1.4%	0	0.8%	1280	1250	85.7%	84.0	-30	-1.7%	-30	-2.5%
6	2/6/81	1457	1626(2/7)	4	6	0%	1.2%	2	1.2%	1260	1230	83.7%	82.9%	-30	-0.8%	-32	-2.0%
7	2/7/81	1657	1721(2/8)	-11	-25	0.3%	0%	-14	-0.3%	1251	1233	84.5%	83.2%	-18	-1.3%	-4	-1.0%
ARITHMETIC MEAN (EQ. 2-1, FROM P.S. 2)								0.29	0.46							-9.6	-1.01
CONFIDENCE INTERVAL (EQ. 2-2, FROM P.S. 2)								12.0	0.71							25.7	1.29
$\lvert\bar{x}\rvert$ + C.I.95								12.3	1.17							35.3	2.3
ZERO DRIFT (% OF SPAN* VALUE)								0.82	1.17	CALIBRATION DRIFT (% OF SPAN)						2.35	2.3

* SPAN VALUES: 1500 PPM, DART; 100%, CHART

APPENDIX B

ZERO AND SPAN CHECKS

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero	0	0	Zero	0	0
Span	2030	50	Span	746	50

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1/30	1120	-0.02	5	.2	.2	2150	2090	54.0	52.5	.4	3	+0.2	.3	770	750	51.6	50.1
1/31	1328	-5	-5	0	0	1960	1960	49.0	49.0	0	5	0.3	0.3	730	750	49.3	50.3
2/1	1731	25	0	0.6	0.0	1965	2035	49.0	50.8	-	-1	-	-0.5	765	752	40.0	48.5
2/2	1830	20	20	0.5	0.5	2100	2025	52.8	51.0								
2/3	1958	100	-5	2.0	0.3	1900	2025	47.8	51.3	4	4	0.7	0.7	740	740	49.4	49.4
2/3	2050	-40	0	-1.5	0.3	2070	2050	52.3	51.5	40	11	2.5	1.2	746	746	49.7	49.7
2/4	2116	15	15	0.9	0.9	2115	2030	53.0	51.0	4	4	0.4	0.4	760	760	51.0	51.0
2/5	1751																
2/5	2155	15	-25	1.0	0.2	960	1980	49.7	50.2	4	4	1.4	1.4	740	740	50.2	50.2
2/6	1455	-15.6	4.6	-	0	2004	2080	49.4	50.9	20	4	0.8	0	736	736	49.4	49.4
2/7	1130																
2/7	1655	15	-15	0.6	0.4	1940	2005	48.5	50.6	6	-11	1.2	0.3	715	730	49.1	49.6
2/8	1215-1500																
2/8	1745	-10	-10	0.1	0.1	2018	2018	50.7	50.7	-25	-15	0	0	720	720	48.3	49.0
2/9	1610	45	15	0.7	-0.1	2020	2055	49.5	50.3	10	10	0.5	0.5	734	734	48.6	48.6
2/10	1840	55	2	.5	-0.7	2080		50.7	50.6	25	15	1.8		774		51.5	49.5

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

Inlet	Dart (%)	Recorder (% of scale)
Zero	0	0
Span	2030	50

Outlet	Dart (%)	Recorder (% of scale)
Zero	0	0
Span	746	50

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
2/22	0900	70	10	1.6	0.1	2080	2080	50.9	50.9	20	1	1.4	0.2	720	758	47.5	50.0
2/24	0900	60	5	1.0	-0.2	2040	2040	50.2	50.2	30	8	1.5	0.6	768	748	50.5	30.5
2/25	1120	70.2	9.6	1.4	0	2070	2060	50.7	50.6	19	-1	1.0	0	725	751	48.2	49.9
2/26	1365	55	14.45	1	9	2130	2075	52.5	50.8	22	.33	1	.25	776	758	51.5	49.8
2/27	1500	60	9.6	1.3	0.4	2004	2070	49.2	51.0	23	4	1	.4	614	753	47.5	50.0
2/28	1730	75	9.6	2.2	0.0	2100	2075	51.6	50.8	65	5	2	0	746	758	52.0	49.9
3/1	1859	39	39	1.2	1.2	2070	2032	51.5	50.9	-	-	-	-	-	719	-	49.5
3/4	1800	60	-5	1.6	0.0	1878	2024	47.0	50.7	15	-11	1.9	0.0	769	721	51.8	49.6
3/5	1840	45	-5	1.25	-0.2	2064	2029	51.7	50.9	13	-1.5	1.5	0.0	733	733	50.1	50.1
3/9	1950	77	-6	2.0	0.0	2055	2030	51.6	50.6	35	-13	3.5	0.2	740	703	52.1	49.3
3/9	2020																
3/10	0930	55	5	1.3	0.1	1994	2024	49.8	50.6	28	-10	2.7	0	699	711	49.0	49.7
3/11	1945	40	12	1.0	0.2	1980	2035	49.5	60.0	20	-5	2.0	0.3	716	716	50.0	50.0
3/12	1545	15	15	0.5	0.5	2009	2025	50.1	50.6	-10	-10	0.5	0.5	718	703	50.4	49.6
3/13	1545	9	9	1.3	1.3	2052	2052	51.4	51.4	-7	-7	2.3	2.3	750	742	94.2	93.5
3/14	1838	9	9	1.5	1.5	2068	2043	52.0	51.3	-10	-10	1.7	1.7	734	734	92.0	92.0

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)
Inlet		
Zero	0	0
Span	2030	50

	Dart (%)	Recorder (% of scale)
Outlet		
Zero	0	0
Span	746	93

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
3/15	1915	19	-6	1.5	1.0	2007	2048	50.6	51.4	2	2	2.5	2.5	751	751	93.5	93.5
3/16	1830	14	9	1.5	1.3	2063	2048	51.8	51.8	-4	-4	3	3	749	749	94.9	94.9
3/17	1945	24	-6	1.8	1.0	2038	2038	51.3	51.3	0	0	3	3	734	434	93.5	93.5
3/18	2120	30	-1	2.0	1.0	2042	2037	51.3	51.0	2	2	3.1	3.1	746	746	94.0	94.0
3/19	1940	14	14	1.3	1.3	2043	2043	51.3	51.3	-15	-15	1.5	1.5	740	740	93.7	93.7
3/19	2000					2099	2038	52.6	51.3					740	739	93.7	93.5
3/20	2030	+30	1	2.0	1.0	3264 2017	2038	81.6 50.6	51.3	-3	-3	3.0	3.0	789	739	98.0	93.5
3/21	1820	24	4	1.6	1.0	2068	2043	52.0	51.3	16	.6	5.0	3.0	740	740	93.5	93.5
3/22	1845	0	-1	1.2	1.0	2058	2058	51.7	51.7	16	-.5	5.0	3.0	740	739	93.6	93.5
3/23	1750	50	-1	2.1	1.0	2073	2043	52.1	51.4	-18	5.6	.75	3.0	719	740	91.0	93.5
3/24	1910	24	-1	1.6	1.0	2078	2043	52.2	51.4	-9	-.48	1.5	3.0	729	739	92.0	93.5
3/25	1845	14	4	1.4	1.1	2030		51.0		-22	2	0.9	3.0	725	745	91.7	93.5
3/26	1645	19		1.4		2020		51.0		-8		2.0		741		93.5	
3/27	1820	9	9	1.3	1.3	2027	2027	51.0	51.0	-11	-16	2.0	2.0	734	734	93.0	93.0
3/28	1710	255	9	2.8	1.2	2022	2022	51.0	51.0	-7.76	-7.76	2.0	2.0	741	743	93.5	93.5
3/29	1800	4	4	0.9	0.9	1976	2043	49.6	51.3	3	3	2.5	2.5	700	739	88.5	93.5

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero	0	0	Zero	0	0
Span	2030	50	Span	746	93

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
3/30	1715	-1	-1	1.0	1.0	2058	2038	51.7	51.3	9	3	4.5	3.0	763	735	98.0	94.0
3/31	1720	29	9	1.4	1.0	2058	2058	51.3	51.3	11	11	3.0	3.0	771	782	92.0	93.5
4/1	1900	14	3.8	1.1	0.7	2063	2053	51.4	51.4	0.56	0.56	2.0	2.0	786	786	93.5	93.5
4/2	2015	19	9	1.2	0.9	2068	2052	51.6	51.3	Not		Functioning		Properly			
4/3	1700	19	0	1.1	0.8	2038	2038	50.9	50.9	-6.7	-6.7	0	0	739	744	88	89.5
4/4	1630	19	4	1.3	0.9	2052	2033	51.8	51.1	29	2	5.0	2	780	747	98	94.5
4/5	1735	19	4	1.3	0.9	2065	2038	52.0	51.2	30	2	5.0	2	732	737	93	93.4
4/5	1820									-60	9	-peg	3		711		84.0

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart, ppm	Recorder (% of scale)		Dart, ppm	Recorder (% of scale)
Inlet			Outlet		
Zero	0	0	Zero	0	0
Span	2030	50	Span	748/400	93/74

		Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
1981 Date	Time	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
4/6	1640	9	-1	1.5	1.0	2055	2055	51.6	51.6	-62 -56	-4 6	-peg -peg	3 2	696 706	751 773	88 85	95 92.5
4/7	1930	19	-6	1.5	1.0	2032	2032	51.2	51.2	-4	-4	0.5	0.5	801	748	Pegged >100	94
4/8	1810	9	1.2	1.2	1.2	2032	2032	51.2	51.2	-4	-4	0.2	0.2	751	747	94.0	93.4
4/10	1400	9	1	1.2	1.1	2030	2030	51.0	51.0	-4	-4	0.5	0.5	731	746	93.4	94.6
4/11	1700	14	-1	1.6	1.0	2030	2032	51.0	51.2	-0.12	-0.12	1.3	1.3	730	747	925	94.3
4/13	1730	34	-1	2.0	1.0	2053	2043	51.6	51.4	-6	-6	.6	.6	759	751	95.8	94.7
4/14	1710	14	-6	1.6	1.0	2110		53.1		3		0.7					
4/14	1900					2073	2027	51.6	50.6	1		0.0					
4/15	1105	14	4	1.6	1.4	2010	2038	50.7	51.3	1	1	0.0	0.0	410	400	82.5	80.5
4/16	1420	9	2	9	2	2037	2037	51.0	51.0	-8	4	-1	-0.4	380	400	72.0	75.0
4/16	1440													53	53	9.4	9.4
4/17	1500	40	-1	2.0	1.1	2027	2027	50.8	50.8	4	4	-.2	-.2	391	396	73.2	74.0
4/18	1700	55	-1	2.5	1.1	2088	2032	52.4	50.8	5.4	2	-.5	-.1	393	396	73.5	74.1
4/19	1445	9	-1	1.5	1.0	1854		46.7		-38	.32	-0.3	-0.0	390	398	73.5	94.6
4/19	1710	106	-1	4.0	1.0	1853	2037	46.5	51.0								
4/20	1800	8.89	8.89	1.5	1.5	2032	2032	50.6	50.6	1.6	1.6	0	0	413	398	77.0	75.0

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

Inlet	Dart,ppm	Recorder (% of scale)
Zero	0	0
Span	2030	50

Outlet	Dart,ppm	Recorder (% of scale)
Zero	0	0
Span	400/1280/146	7 75/96/58

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
4/21	1400	14	9	1.5	1.1	2022	2038	50.9	51.1	11	8	2.5	0.5	396	398	74	74.1
4/22	1700	34	4	3	1.1	1997	2032	50.0	50.9	4	4	-1	-1	387	400	72	75
5/20	Morn	Chart Rec only 1%						51.3					0				85.5
5/20	1740	-	-			-	-			9	9			1759	1283		
5/21	1150	-6	-6			2052	2052			7	7			1310	1283		
5/22	1650	24	9			2083	2048			19	19			1330	1785		
5/23	1820	29	4			2017	2017			9	3			1269	1269		
5/24	1710	9	9			2022	2022			5	5			1281	1281		
5/27	1550	14	14	1.5	1.5	2040	2033	51.5	51.1	17	1	3.5	3.0	1260	1282	95.0	96.6
5/31	1530	-31	3.78		476	2047				31.05	5.37			722	748		
6/1	1740	4	4	1	1		2032		51.0	9	9	3	3	747	747	56.5	56.5
6/2	1400	9	9	1.2	1.2	2032	2032	51	51	15	1	3.5	3.0	722	742	56.1	
6/3	1620	9	9	1.2	1.2	2012	2027	50.5	51	14	14	3.4	3.4	755	748	59.1	58.5
6/4	1310	9	9	1	1	2047	2027	52	51.5	1	1	3	3	732	744	57.9	58.4
6/5	1645	29	4	1.6	1.2	2012	2038	51	51.6	-4.5	-4.5	3.4	3.4	748	748	60	60
6/6	1445	-6	-6	1.1	1.1	2027	2027	51.5	51.5	-.55	-.55	3	3	736	744	58.0	58.7

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

		Dart,ppm	Recorder (% of scale)		Dart,ppm	Recorder (% of scale)
Inlet				**Outlet**		
	Zero	0	0	Zero	0	0
	Span	2030	50	Span	746/400	58/50

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
6/8	1700	-22	9	-	1.2	2037	2037	51.6	51.6	13	1	-	3.1	728	746	57.1	58.4
6/9	1715	0	0	1.4	1.4	2022	2033	51.2	51.4	1.4	1.4	3.5	3.5	736	744	59.0	59.7
6/10	1530	-1.33	-1.33	1.5	1.5	2063	2032	52.4	51.2	102.15	-0.55			767.7	744.02		58.0
6/11	1330	4	4	1.4	1.4	2038	2038	51.7	51.7	-	1.4	-	3.7	734	740	59.5	59.8
6/12	1700	14	14	1.5	1.5	2043	2043	51.8	51.8	-6	-6	3.5	3.5	720	756	59	62.5
6/23	1410	3.8	3.8	0	0	2032	2032	47.5	47.5	377	0		-1	1117	747	56.1	37.7
6/24	1010									-16	-2			825	745		
6/24	1630	34.4	4.0	.07	0	2012	2030	42	47.5								
6/25	1600	9	9	.2	.2	2027	2027	47.5	47.5	0	0	-1	-1	731	749	36.6	37.6
6/26		4	4	0	0	2070	2043	49.0	47.5	-3	-3	-1	-1	800	743	40	37
6/27	1040	9	9	.3	.3	2042	2042	47.7	47.7	0	0	-.5	-.5	745	745	37.5	37.5
6/28	1040	-1	-1	-.2	-.2	2007	2032	47.2	47.5	7	7	-.2	-.2	747	747	37.6	37.6
6/29	1645	19	9	.6	.2	2063	2038	48.0	47.7	0	0	.-5	.-5	398		20	80
7/1	1700	9	9	.2	.2	2053	2038	48.1	47.8	1.8	1.8	0	0	405	405	81	81
7/2	1900	9	9			1966	2032	-	-	3	3	-	-	-	246	82	50
7/3	1700	29.3	3.8	.11	.4	2022	47.5	2022	475	-4.7	-4.7	0	0	400	400	50.7	50.7

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

Inlet	Dart,ppm	Recorder (% of scale)	Outlet	Dart,ppm	Recorder (% of scale)
Zero	0	0	Zero	0	0
Span	2030	48	Span	400	50/80

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
7/4	1430	-1.33	-1.33	-	-			2042	2042	-7.51	-7.51	-	-	411	411	-	-
7/5	1430	8.89	8.89	-	-	1981	2012	-	-	-7.51	-7.51	-	-	478	413	-	-
7/6	1800	-1	-1	0	0	2032	2032	47.5	47.5	-1	-1	0	0	438	399	55	50
7/7	1600	-1	-1	0	0	2077	2022	47.5	47.5	3	3	.5	.5	403	403	51	51
7/8	1745	4	4	.1	.1	2032	2032	47.5	47.5	-2	-2	0	0	413	400	52	50.5
7/9	1700	-1	-1	0	0	2038	2038	47.7	47.7	0	0	.2	.2	399	399	50	50
7/10	1800	14	14	.5	.5	2048	2048	48.0	48.0	-4	0	0	0	-	399	-	80
7/12	1200	-12	-12	-	-	2017	2017	-	-	0.6	0.6	-	-	401	413	-	-
7/13	1700	9	9	.3	.3	2042	2042	47.8	47.8	0.6	0.6	0	0	417	401	83	80
7/14	1630	4	4	.2	.2	2022	2022	47.5	47.5	0.6	0.6	0	0	410	399	82	80
7/16	2000	-17.1	8.9	-	-	2017	2017	-	-	-3.6	2.4	-	-	414	414	-	-
7/17	1800	19	-1	.5	0	1981	2007	46.5	47.0	-.6	-.5	7	7	405	405	Pegged	
7/19		-1.33	-1.33	0	0	2017	1997	47.5	46.9	-1.21	-1.21	9.5	9.5	424	401		100+
7/20	1730			.1		1854	1997		46.7	0	0	10.0	10.0	385	399	100+	100+
7/21	1530	9	9	.1	.1	2002	2002	46.9	46.9	-2	-2	9.5	9.5	399	399	100+	100+
7/22	1500									-7.82	-7.82	10.5	10.5	386	413	100+	100+

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart ppm	Recorder (% of scale)
Inlet		
Zero	0	0
Span	2000	47

	Dart ppm	Recorder (% of scale)
Outlet		
Zero	0	0
Span	400	78

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
7/22	2230	8.89	8.87	-	-	1971	2006	-	-								
7/23	1515	-1	-1	0	0	1997	1997	46.6	46.6	-2	-2	10.	10.	409	409	100+	100+
7/24	1445									1	1	12.	12.	410	399	100+	100+
7/24	1900	9	9	.2	.2	1997	1997	46.6	46.6								
7/25	2200	4	4	-	-	2012	2012	-	-	-1	-1	-	-	393	393	-	-
7/26	1340	0	0	0	0	1990	2002	46.5	47.0	0	0	15.5	15.5	405	405	100+	100+
7/27	1920		0	0	0	2000		27.5	50.0	-	-	15.5	0	400		100+	80
			0	6%		2000		68%				-1	-1	400			45
7/29	1830	-37.1	3.78	0	1%	2150	2002	51	475								
7/30	1600	-1	-1	4%	4%	1971	2007	47	48	1.8	1.8	.3	.3	405	405	78.2	78.2
7/31	1700	-42	-1	-.5	0.6	1971	2002	47.2	47.9	-3	-1	-1.0	-0.5	411	402	79	77.5
8/1	2200	34	8	-	1.2	2012	2012	48	48	-.6	-.6	-	-	408	408	78.7	78.7
8/2	1330	-37	8.9	-	-	1989	1989	-	-	1.2	1.2	-	-	418	418	-	-
8/3	1805	-16	-1	.5	.9	1981	1996	47.5	47.7	0	0	0	0	408	401	78.9	77.5
8/4	1600	-1	-1	1.0	1.0	2000	2000	47.6	47.6								
8/4	2300									184	4.8	-	-	426	410	-	78.7

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart, ppm	Recorder (% of scale)
Inlet		
Zero	0	0
Span	2000	48

	Dart, ppm	Recorder (% of scale)
Outlet		
Zero	0	0
Span	400	78

1981 Date	Time	Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
8/5	1500									0	0	(S-2) 8	(S-2) 8	419	404	100+	100+
8/5	2400	-27	-6	-	-	2002	2002	-	-	-	-	-	-	-	-	-	-
8/6	1630	-22	4	0.5	1.0	1981	2002	47.4	47.9	0	0	0	0	402	402	77.5	77.5
8/7	2300	-22	-1.3	-	-	2022	2022	-	-	1.2	1.2	-	-	407	407	-	-
8/9	1750	-37.1	3.9	0	1.0	2027	2017	48.6	48.3	-0	-0	<0	<0	402	402	72.2	72.2
8/10	1530	-22	9	.5	1.0	2022	2007	48.3	48.0								
8/10	1820									-13	0	<0	0	404	404	77.5	77.5
8/11	1910	-27	-1	.5	1.0	1986	2007	47.4	48.0	-7	0	0	0	421	400	81.0	77.0
8/13	1030	-	-1	-	1.0	-	2002		47.9		0	0	0	405	405	78	78
8/14	1600	-27	-6	0.5	0.8	1997	1997	47.6	47.6	4	-1	0.5	-.4	397	397	76.5	76.5
8/15	1230									-3	-1			397	397	77.5	77.5
8/16	0130	-6	-6	-	-	1935	2012	-	-								
8/17	1100	-22	-1	0.5	1.0	2002	2002	48.0	48.0	0	0	0	0	362	399	70	77
8/18	2030	-27	-6	0.5	0.9	1997	1997	47.5	475	0	0	0	0	-	746	-	93.3
8/19	1345									-9	1	<0	0				
										-	0	-	14	758	745	100+	100+

DAILY SO_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart, ppm	Recorder (% of scale)		Dart, ppm	Recorder (% of scale)
Inlet			**Outlet**		
Zero	0	0	Zero	0	0
Span	2000	48	Span	746	94

		Inlet DuPont								Outlet DuPont							
		Zero				Span				Zero				Span			
		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)		Dart (ppm)		Recorder (%)	
Date	Time	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
8/19	1745	-27	-1	0.4	1.0	1986	2002	47.5	48.0								
8/20	1500	9	9	1.1	1.1	2002	2002	47.9	47.9	-5	1	<0	0	-	745	96.5	93
8/21										3	0	-	0	752	746	93.9	93.1
8/22	1700	-42	3	0	1.3	1997	1997	47.9	47.9	5	-1	.5	0	750	747	93.8	93.5
8/23	1630	4	4	1	1	1997	1997	47.7	47.7	1	1	0	0	746	746	93.5	93.5
8/24	1830	-6	-6	1	1	1992	1992	47.6	47.6	-5	0	-5	0	748	748	93.6	93.6
8/25	1800	29	5	.5	0	-	2010	-	50%	-5	-1	-1%	0	755	747	94.2	93.5
8/26	1700	24	5	0.5	0	2010	2010	50	50	-8	0	-1%	0	741	749	92.6	93.6

DAILY O_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero	0	0	Zero	0	0
Span (Air)	20.9	95	Span (Air)	20.9	95
Mid-Span	8.2	37	Mid-Span	9.7	44

		Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
1981 Date	Time	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
1/30	1150	-0.02	-0.02	.2	.2	7.71	7.71	37.0	37.0	.3	.3	.2	.2	10.37	-9.51	49.8	45.3
1/31	1418	0.00	0.00	.3	0.3	7.75	7.75	37.3	37.3	0.03	0.03	0.3	0.3	9.0	9.6	40.6	46.0
2/1	1715	0.00	0.00	0.3	0.3	7.80	7.81	37.8	37.79	0.03	0.03	0.3	0.3	9.45	9.45	45.0	45.0
		0.03	0.00	0.3	0.3												
2/2	1848									0.06	0.06	0.5	0.5				
2/3	2031		0.5			19.4	"	94.0		0.06	0.06	0.7	0.7		"		
2/4	2143				0.3				38.2				0.3				46.5
2/5	1730		-0.21		0						-0.18		0				45
2/6	1449						HI-LEVEL								HI-LEVEL		
2/7	1100	-0.2	-0.2	0	0	20.3	19.55	99.0	95.2	-0.18	-0.18	0	0	20.8	19.5	100.6	94
2/7	1655																
2/8	1215-1300	-0.24	-0.03	-0.2	-0.2	∿7.2	7.9	35.1	36.0	-0.18	0.0	0	0	8.48	9.6	41.7	43
2/9	1610	-0.00	-0.00	-0.1	-0.1	7.7	8.0	35.6	36	0.13	0.13	0.1	0.1	-	-	43.0	43.0
2/10	1843	-0.00	-0.00	0	0	-	7.9	-	35.8	-0.00	-0.00	0.4	0.4	-	9.8	-	44
2/22	0900	-0.03	-0.03	-0.2	-0.2	7.9	7.9	36.0	36.0	0.00	0.00	0	0	9.7	9.7	44.3	44.3

DAILY O₂ ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

Inlet	Dart (%)	Recorder (% of scale)
Zero	0	0
Span (Air)	20.9	95
Mid-Span	8.2	37

Outlet	Dart (%)	Recorder (% of scale)
Zero	0	0
Span (Air)	20.9	95
Mid-Span	9.7	44

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
2/24	0900	0.00	0.00	0	0	8.1	8.1	370	370	0.01	0.01	0.2	0.2	9.5	9.5	43.0	43.0
2/25	1120	0.00	0.00	0.3	0.3	8.06	8.06	36.7	36.7	0.01	0.01	0.5	0.5	9.6	9.6	43.5	43
2/26	1340	0.00	0.00	0	0	8.3	8.3	37.5	37	0.00	0.00	0	0	9.7	9.7	44	44
2/27	1550	-0.03	-0.03	0.1	0.1	8.2	8.2 .	37.2	37.2	0.05	0.05	0.3	0.3	10.6	10.6	48	48
3/1	1859	-0.00	-0.00	0	0									9.86	9.86	44.5	44.5
3/4	1800					20.9	20.9	95.2	95	0.03	0.03	0.3	0.3	20.9	20.9	95.6	95.2
3/5	1840	0.03	0.03	0.3	0.3	21.05	21.05	96.1	96	.05	.05	0.2	0.2	20.92	20.97	95.5	95.
3/9	1950	-0.03	-0.03	0	0	21.0	21.0	96.0	96.0	0.0	0.0	0.2	0.2	21.05	21.05	95.8	
3/9	2020		-0.0	0	0	8.0	8.0	36.6	36.6					9.0	9.0	40.6	40.6
3/10	0930	0.04	0.04	0.4	0.4	21.1	21.1	96.3	96.3	0.0	0.0	0.2	0.2	21.0	21.0	95.2	95.8
3/11	1945	0.0	0.0	0	0	20.94	20.94	95.2	95.2	0.0	0.0	0	0	20.72	20.72	94.6	94.6
3/12	1545	0.0	0.0	0	0	20.6	20.6	94.2	94.2	0.0	0.0	0	0	20.9	20.9	95.2	95.0
3/13	1545	-0.03	-0.03	0	0	21.2	21.2	96.5	96.5	0.0	0.0	0.2	0.2	20.9	20.9	95.4	95.4
3/14	1840	-0.03	-0.03	0.1	0.1	20.8	20.8	94.7	94.	0.0	0.0	0.4	0.4	20.9	20.9	95.0	95.0
3/15	1915	-0.08	-0.08	0.1	0.1	20.8	20.8	94.5	94.5	-0.03	-0.03	0.4	0.4	20.67	20.67	94.6	94.6

DAILY O₂ ZERO AND MID-SPAN MEASUREMENTS

Calibration Values: Dart (%) Recorder (% of scale) Dart (%) Recorder (% of scale)

Inlet
Zero
Span (Air)
Mid-Span

Outlet
Zero
Span (Air)
Mid-Span

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
3/16	1830	0.00	0.00	0.00	0.11	20.7	20.7	94.3	94.3	0.00	0.00	0.00	0.00	20.7	20.7	94.3	94.3
3/17	1945	0.00	0.00	0.2	0.2	20.7	20.7	94.3	94.3	0.00	0.00	0.0	0.0	20.9	20.9	95.1	95.1
3/18	2120	0.00	0.00	0.1	0.2	21.1	21.1	96.0	96.0	0.00	0.00	0.3	0.3	20.9	20.9	94.9	94.9
3/19	1932	.06	.06	0.0	0.0					0.00	0.00	.25	.25	20.92	20.92	95.1	95.1
3/19	2000													20.9	20.9	100^+	95.
3/20	2030	-0.06	-0.06	0.0	0.0	20.9	20.9	95.0	95.0	0.00	0.0	0.00	0.0	20.95	20.95	95.5	95.5
3/21	1940	-.06	-.06	0.0	0.0	20.3	20.83	92.5	95.0	0.00	0.0	0.10	0.10	20.67	20.67	94.0	94.0
3/22	1850	-.03	-.03	.01	.01	20.83	20.83	95.0	95.0	-.03	-.03	0.20	0.20	20.83	20.83	95.0	95.0
3/23	1950	0.0	0.0	0.0	0.0	20.66	20.66	94.0	94.4	.02	.02	.4	.4	20.75	20.75	94.5	94.5
3/24	1910	-.03		0.2		20.50	20.5	93.6	93.6	0.0	0.0	0.3	0.3	20.83	20.83	94.6	94.6
3/25	1845	0.0	0.0	0.0	0.0	21.1	20.9	96.3	95.0	0.0	0.0	0.0	0.0	20.75	20.75	94.6	94.6
3/26	1645	5.0		6.0		20.9		95.5		0.02		0.3		20.9		95.5	
3/27	1820	-0.03	-0.03	0.1	0.1	20.7	20.9	94.5	95.5	0.02	0.02	0.3	0.3	20.9	20.9	95.0	95.0
3/28	1710	0.0	0.0	0.0	0.0	20.8	20.8	94.5	94.5	0.0	0.0	0.3	0.3	20.7	20.75	94.0	94.5
3/29	1800	0.0	0.0	0.0	0.0	20.9	20.9	95.1	95.1	0.00	0.00	0.3	0.3	21.0	21.0	95.2	95.2

DAILY O_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values: Dart (%) Recorder (% of scale) Dart (%) Recorder (% of scale)

Inlet
Zero
Span (Air)
Mid-Span

Outlet
Zero
Span (Air)
Mid-Span

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
3/30	1715	0.0	0.0	0.3	0.3	20.4	20.7	93.2	94.5	0.02	0.02	0.4	0.4	20.8	20.8	94.5	94.5
3/31	1720	-0.03	0.00	0.0	0.9	20.9	20.9	95.1	95.1	0.00	0.00	0.3	0.3	20.5	20.5	93.5	93.5
4/1	1900	-0.03	-0.03	0.3	0.3	20.5	20.7	93.6	94.6	0.05	0.00	0.4	0.3	20.7	20.7	94.2	94.2
4/2	2015	0.0	0.0	0.3	0.3	20.72	20.7	94.4	94.4					20.8	20.8	94.4	94.4
4/3	2015	0.03	0.03	0.4	0.4	20.69	20.69	94.3	94.3	0.0	0.0	0.3	0.3	20.7	20.7	94.1	94.1
4/4	1630	0.0	0.0	0.0	0.0	20.9	20.9	94.8	94.8	0.0	0.0	0.3	0.3	20.9	20.9	94.7	94.7
4/5	1730	0.0	0.0	0.3	0.3	20.8	20.8	94.8	94.8	0.0	0.0	0.3	0.3	20.9	20.9	94.6	94.6

DAILY O₂ ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)
Inlet		
Zero		
Span (Air)		
Mid-Span		

	Dart (%)	Recorder (% of scale)
Outlet		
Zero		
Span (Air)		
Mid-Span		

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
4/6	1640	0.0	0.0	0.02	0.02	20.8	20.8	94.5	94.5	0.0	0.0	0.3	0.3	20.8	20.8	94.5	94.5
4/6	1700					9.2		42						9.4			
4/7	1930	-0.0	-0.0	.3	.3	20.8	20.8	94.5	94.5	0.0	0.0	0.3	0.3	20.9	20.9	94.7	94.7
4/8	1810	-0.0	-0.0	0.2	0.2	8.1				-0.03	-0.03	0.2	0.2				
4/10	1400	-0.00	-0.00	0.2	0.2					-0.00	0.00	0.2	0.2	19.4	20.97	88.4	95.1
4/10	1420					7.4		33.9						7.6		34.5	
4/11	1700	-0.03	-0.03	0.2	0.2	20.9	20.9	94.8	94.8	-0.03	-0.03	0.3	0.3	20.8	20.86	94.4	94.6
4/11						7.75		35.5						7.37		33.4	
4/13	1730	-0.0	-0.0	0.1	0.1	20.7	20.7	94.4	94.4	-0.0	-0.0	0.3	0.3	20.7	20.7	93.7	93.7
4/13	1815					7.73	7.12	35.2	32.6					7.31	7.12	33.5	32.6
4/14	1710	0.5															
4/14	1900	-0.08	-.06	-.2	0.0												
4/15	1105	-0.03	-0.07	0.2	0.2	19.8	19.8	90.0	90.0	-0.03	-0.03	0.3	0.3	20.6	20.6	93.5	93.5
4/15	1130					7.2	7.2	33.0	33.0					7.13	7.13	32.5	32.5
4/16	1420	-0.00	-0.00	0.0	0.0	19.5	19.5	90.1	90.1	-0.00	-0.00	0.1	0.1	20.3	20.3	92.2	92.2

DAILY O₂ ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero			Zero		
Span (Air)			Span (Air)		
Mid-Span			Mid-Span		

		Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
1981 Date	Time	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
4/16	1505					7.20	7.20	33.5	33.5					7.25	7.25	32.6	32.6
4/17	1500	-.03	.3	-0.3	.3	19.4	19.4	88.5	88.5	-.03	-.03	.2	.2	20.3	20.3	92.0	92.0
						7.12	7.12	33.0	33.0					7.15	7.15	32.8	32.8
										-0.03	-0.03	0.2	0.2	19.7	20.3	92.3	92.3
														7.28	7.28	33.4	33.4
4/19										-0.03	-0.03	0.2	0.2	20.2	20.2	91.5	91.5
														7.39	7.17	33.5	32.5
4/20										-.03	-.03	.1	.1	7.09	7.09	33.6	33.6
4/21										0.05	0.05	0.2	0.2	7.4	7.2	34	32.5
4/22	1700	0.2	-0.03	1.0	0.1	6.8	7.1	31.5	31.5	-0.03	-0.03	0.2	0.2	7.1	7.1	32.2	32.2
5/20	1750									-0.0	-0.0			7.01	7.15		
5/21	1150									-.03	-.03			–	–		
5/22	1630									0.0	0.0			7.34	7.15		
5/23	1820									.02	0.02			7.26	7.23		
5/24	1710									0.2	0.2			7.28	7.28		

DAILY O$_2$ ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			Outlet		
Zero			Zero		
Span (Air)			Span (Air)		
Mid-Span			Mid-Span		

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
5/25	1410									0.2	0.2			7.17	7.15		
5/27	1550	Out -	Cell Broken							0.22	0.22	2	2	7.3	7.3	33	33
6/1		Out								0.1	0.1	1	1	7.1	7.1	32.5	32.5
6/2	1700	-.08	-.08	-.5	-.5	6.98	7.06	32	33	.16	.16	1.2	1.2	7.12	7.12	32.5	32.5
6/3	1620	-0.08	-0.08	-.5	-.5	7.20	7.20	33	33	.13	.13	1.1	1.1	7.06	7.06	32.5	32.5
6/4	1310	0.08	0.08	0.5	0.5	7.17	7.17	33	33	0.6	0.6	1.6	1.6	7.06	7.06	32.5	32.5
6/5	1645	-0.08	-0.08	0.0	0.0	7.17	7.17	33.5	33.5	.13	.13	1.1	1.1	7.39	7.15	34.0	32.9
6/6	1445	-.08	-.08	0.0	0.0	7.23	7.23	33.5	7.23	.16	.16	1.2	1.2	7.06	7.06	32.6	32.6
6/8	1700	-.08	-.08	0.0	0.0	7.17	7.17	33.5	33.5	.11	.11	1.0	1.0	6.95	7.12	32	32.6
6/9	1715	-.14	-.14	0.0	0.0	7.14	7.14	33.4	33.4	.22	.22	1.4	1.4	7.06	7.06	32.4	32.4
6/10	1530	-.20	.03	0	.7	7.45	7.17	34.2	33.4	0.16	0.02		.05	6.73	7.17	31.5	32.8
6/11	1530	.08	.08	1.0	1.0	7.17	7.17	33.6	33.6	.13	-.03	1.0	0.2	6.90	7.12	31.5	32.5
6/12	1700	.11	.11	1.1	1.1	7.23	7.23	33.6	33.6	.16	.16	1.2	1.2	6.84	7.15	31.0	33.0
6/23	1410	0.30	.03	0.5	-1.0	16.59	16.81	70.6	71.7	.85	.22	3.0	0.0	14.57	16.72	62.4	71.3

DAILY O_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)
Inlet		
Zero		
Span (Air)		
Mid-Span		

	Dart (%)	Recorder (% of scale)
Outlet		
Zero		
Span (Air)		
Mid-Span		

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
6/24	1020									.06	.06			7.13	7.13		
6/24	1630	-.03	-.03	0	0	7.1	7.1	71	71								
6/25	1610	-.05	-.05	-.5	-.5	7.13	7.13	71.2	71.2								
6/26		-.05	-.05	-1	-1	7.0	7.13	70	71.3	.52	-.10	5.5	-1.0	6.65	7.23	66.5	72.3
6/27	1040	-.05	-.05	-.5	-.5	7.25	7.25	72.5	72.5	-.01	-.01	0	0	7.25	7.25	72	72
6/28	1040	-.06	-.06	-1.	-1.	7.15	7.15	71.5	71.5	-.07	-.07	-.7	-.7	7.20	7.20	71.8	71.8
6/29	1645	-.04	-.04	-.4	-.4	7.17	7.17	71.7	71.7	-.15	-.15	-1.0	-1.0	7.06	7.06	70.5	70.5
7/1	1700	-.07	-.07	-1	-1	7.25	7.25	72.5	72.5	-.07	-.07	-.7	-7	7.10	7.10	71.0	71.0
7/2	1900	-.04	-.04	-	-	7.24	7.24	-	-	-.16	-.01	-1	0	7.20	7.20	72.0	72.0
7/3	1700	.02	.02	-	-	7.84	7.19	-	-	.02	.02	-	-	7.20	7.20	-	
7/4	1430	-0.00	-0.00	-	-	7.19	7.19	-	-	.11	.08	.08	.06	7.17	7.17	7.25	7.25
7/5	1430	-0.03	-0.03	-	-	7.13	7.13	-	-	.08	.08	-	-	7.21	7.21	-	-
7/6	1800	0	0	0	0	7.24	7.24	72.4	72.4	0.03	0.03	-	-	6.77	7.11	-	-
7/7	1600	-.02	-.02	-.5	-.5	7.24	7.24	72.4	72.4	.2	.01	2	.1	7.04	7.18	70.4	71.8
7/8	1745	-.03	-.03	-.5	-.5	7.21	7.21	72.0	72.0	.09	.09	.9	.9	7.14	7.14	71.5	71.5
										.08	.08	.8	.8	7.09	7.09	71.0	71.0

DAILY O_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero			Zero		
Span (Air)			Span (Air)		
Mid-Span			Mid-Span		

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
7/9	1700	-.01	-.01	-.1	-.1	7.18	7.18	71.9	71.9	.12	0	1.2	0	7.08	7.08	70.6	70.6
7/10	1800	0	0	0	0	7.17	7.17	72.0	72.0	-.02	-.02	0	0	6.86	7.11	68.6	71.1
7/12	1200	.04	.04	-	-	7.23	7.23	-	-	.04	.04	-	-	7.08	7.08	-	-
7/13	1700	-.02	-.02	-.5	-.5	7.24	7.24	72.4	72.4	.08	.08	.8	.8	7.31	7.22	73.1	72.2
7/14	1630	-.03	-.03	-.5	-.5	7.26	7.26	73.0	73.0	.13	.13	1.3	1.3	7.12	7.12	71.0	71.0
7/16	200	-.02	-.02	-	-	7.30	7.30	-	-	.15	.15	-	-	7.13	7.13	-	-
7/17	1800	.01	.01	.1	.1	7.53	7.17	75.5	71.7	-.16	.01	-.5	.1	7.20	7.20	71.7	71.7
7/19	1730	-.58	.08	-10	-.5	7.13	7.13	71.1	71.1	.05	.05	-	-	7.13	7.13	70.6	70.6
7/20	1730	-.10	-.1	-1.0	-1.0	7.07	7.07	71.0	71.0	.10	.10	1.2	1.2	7.10	7.10	70.9	70.9
7/21	1530	-.05	-.05	-.5	-.5	7.16	7.16	71.5	71.5	.25	.02	2.5	.2	6.90	7.21	69	72.1
7/22										.14	.08	.1	-0	7.3	7.13	72.5	70.5
7/22	2230	.08	.08	-	-	6.71	7.06	-	-								
7/23	1515	.03	.03	.3	.3	7.0	7.16	70.0	71.5	.16	0	1.6	0	7.05	7.12	70.5	71.2
7/24	1445									-.03	-.03	-.3	-.3	7.0	7.16	70.0	71.6
7/24	1900	.04	.04	.4	.4	7.09	7.15	71.0	71.7			-	-				

DAILY O_2 ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero			Zero		
Span (Air)			Span (Air)		
Mid-Span			Mid-Span		

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
7/25	2200	.02	.02	–	–	7.17	7.17	–	–	.08	.08	–	–	7.26	7.26	–	–
7/26	1340	.10	.05	1.0	.5	7.19	7.19	72.1	72.1	.10	–.01	1.0	–.1	7.15	7.15	71.5	71.5
7/29	1830	0.24	–.04	–	.5	7.18	7.18	73	73								
7/30	1600	–.04	–.04	0.5	0.5	7.16	7.16	72.6	72.6	.10	.10	1.0	1.0	7.12	7.12	71.5	71.5
7/31	1700	–.05	–.05	–	–	7.23	7.23	73.0	73.0	.13	–.10	1.3	–1.0	7.06	7.06	71.2	71.2
8/1	2200	–.15	–.05	<0	<0	7.24	7.24	73	73	–.23	–.13	–	<0	7.24	7.23	73	73
8/2	1330	0	0	–	–	7.24	7.19	–	–	.12	.12	–	–	7.01	7.08	–	–
8/3	1805	–.04	–.04	.5	.5	7.20	7.20	73.2	73.2	0	0	1	1	7.08	7.08	71.6	71.6
8/4	1600	–.04	–.04	.5	.5	7.03	7.17	71.3	72.6								
8/4	2300									–.37	–.01	–	–	7.73	7.10	–	72.5
8/5	1500									–.03	–.03	0.6	0.6	6.98	7.16	71	72.5
8/5	2400	–.07	–.07	–	–	7.24	7.27	–	–								
8/6	1630	.03	.03	1.2	1.2	7.25	7.18	73.5	73.1	–.03	–.03	1.0	1.0	7.18	7.18	73.0	73.0
8/7	2300	–.03	–.03	–	–	7.17	7.17	–	–	–.03	–.03	–	–	7.12	7.12	–	–
8/9	1730	0	0	–	–	7.19	7.19	72.8	73.2	.02	.02	1.3	1.3	7.06	7.14	72.3	73.0

DAILY O₂ ZERO AND MID-SPAN MEASUREMENTS

Calibration Values:

	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero			Zero		
Span (Air)			Span (Air)		
Mid-Span			Mid-Span		

1981 Date	Time	Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
		Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
8/10	1530	-.02	-.02	0.9	0.9	7.18	7.18	73.0	73.0								
8/10	1820									-.02	-.02	1.0	1.0	8.25	8.25	83.1	83.1
8/11	1910	-.01	-.01	0.7	0.7	7.19	7.19	73.1	73.1	-.03	-.03	.9	.9	8.16	8.16	82.5	82.5
8/13	1030	-.05	-.05	0.5	0.5	7.32		74.3		-.03	-.03	.9	.9	8.22	8.22	83.1	83.1
8/14	1600	-.04	-.04	0.5	0.5	7.02	7.19	71.5	73.1	0	0	1.0	1.0	8.22	8.22	83.5	83.5
8/15	1230									.03	0.03	1.0	1.0	8.15	8.15	82.5	82.5
8/16	0130	-.06	-.06	-	-	7.28	7.20	-	-								
8/17	1100	.12	.05	2.1	1.5	7.15	7.15	72.8	72.8	-.04	-.04	1.0	1.0	8.19	8.19	82.7	82.7
8/19	1345									-.04	-.04	0.5	0.5	8.16	8.16	82.4	82.4
8/19	1745	-.15	0.0	<0	1.0	7.21	7.21	73.1	73.1								
8/20	1500	.02	.02	1.0	1.0	7.18	7.18	73.0	73.0	-.03	-.03	0.5	0.5	8.11	8.24	-	83.1
8/21	1920	-.08	.02	-	-	7.13	7.13	-	-	-.04	-.04	.8	.8	8.18	8.18	82.5	82.5
8/22	1700	.01	.01	1.0	1.0	7.18	7.18	72.9	72.9	-.03	-.03	.9	.9	8.25	8.25	83.5	83.5
8/23	1630	0	0	1.0	1.0	7.17	7.17	73.0	73.0	-.03	-.03	.9	.9	8.30	8.13	84.0	82.2
8/24	1830	.03	.03	1.3	1.3	7.17	7.17	73.1	73.1	-.03	-.03	0.9	0.9	8.08	8.25	81.6	83.5

DAILY O_2 ZERO AND MID-SPAN MEASUREMENTS

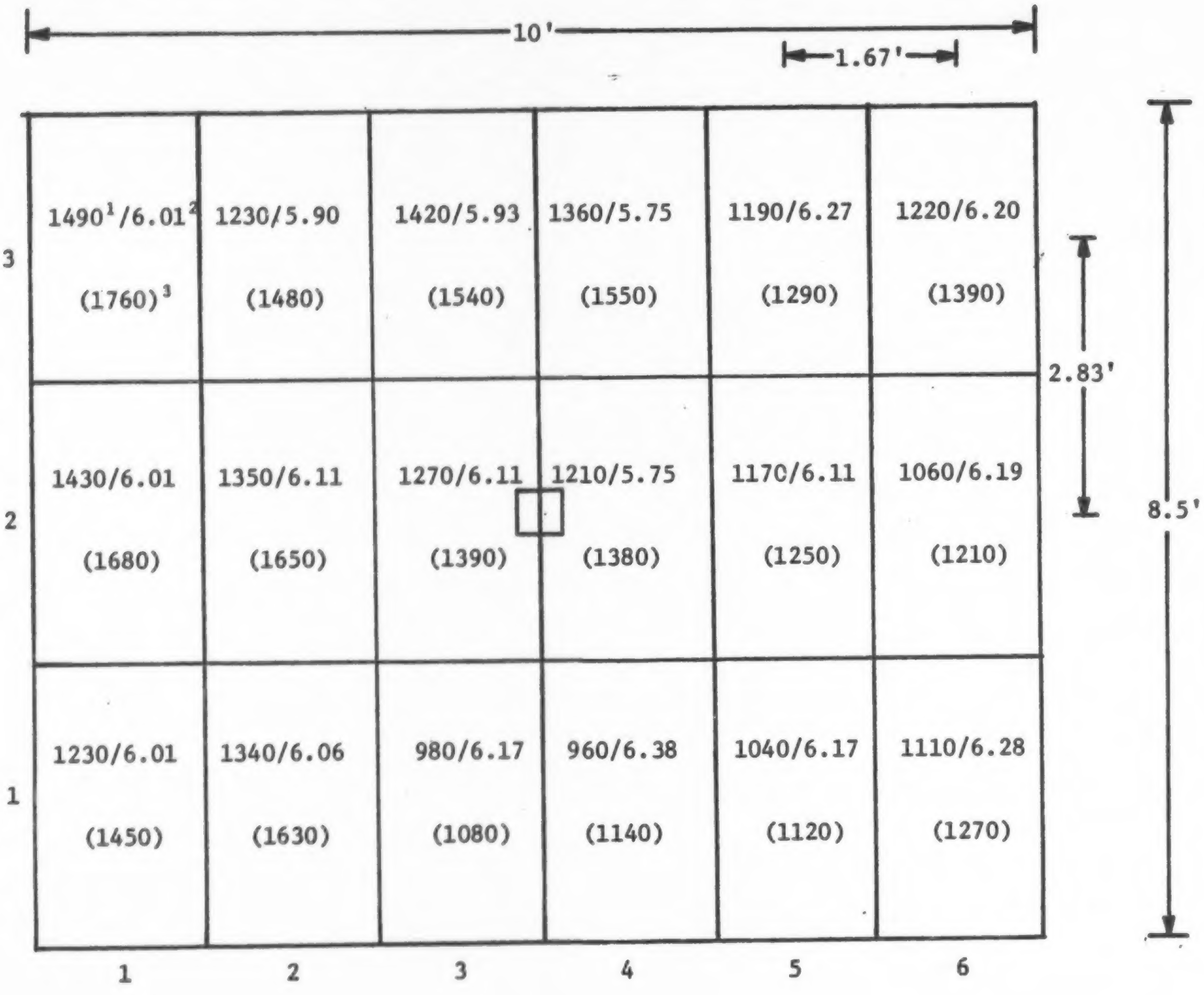
Calibration Values:	Dart (%)	Recorder (% of scale)		Dart (%)	Recorder (% of scale)
Inlet			**Outlet**		
Zero			Zero		
Span (Air)			Span (Air)		
Mid-Span			Mid-Span		

		Inlet Thermox								Outlet Thermox							
		Zero				Span				Zero				Span			
		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)		Dart (%)		Recorder (% of scale)	
Date	Time	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final	Initial	Final
8/25	1800	0	0	1.0	1.0	7.20	7.20	73.4	73.4	-.04	-.04	0.8	0.8	8.21	8.21	83.0	83.0
8/26	1700	.03	.03	1.3	1.3	7.25	7.25	73.7	73.7	-.03	-.03	0.9	0.9	8.31	8.22	84.0	83.0
9/3	1100	0.99	-0.04	13.3	0.5	6.94	7.17	70.5	72.6	-0.03	-	0.9	-	8.22	-	83.4	-
9/7	1700	0.00	0.00	0.5	0.5	7.18	7.18	73.4	73.4	0.01	0.01	1.4	1.4	8.34	8.34	84.0	84.0
9/8	1700	-0.5	-0.1	-0.5	0.0	7.51	720	76.0	73.0	0.00	0.00	1.4	1.4	8.25	8.23	83.5	83.5

APPENDIX C

SO_2 STRATIFICATION DATA

S-1 Outlet SO_2 Stratification Traverse (1-10-81)



	1	2	3	4	5	6
3	1490[1]/6.01[2] (1760)[3]	1230/5.90 (1480)	1420/5.93 (1540)	1360/5.75 (1550)	1190/6.27 (1290)	1220/6.20 (1390)
2	1430/6.01 (1680)	1350/6.11 (1650)	1270/6.11 (1390)	1210/5.75 (1380)	1170/6.11 (1250)	1060/6.19 (1210)
1	1230/6.01 (1450)	1340/6.06 (1630)	980/6.17 (1080)	960/6.38 (1140)	1040/6.17 (1120)	1110/6.28 (1270)

Centroid Measurements	1030/7.67 1310	1100/6.27 1270	1230/6.27 1420	1170/6.04 1330	1260/6.27 1450	1190/6.27 1370

Centroid Average = 1360

Traverse Average = 1400

$$\text{Deviation} = \frac{1360-1400}{1400} = -2.9\%$$

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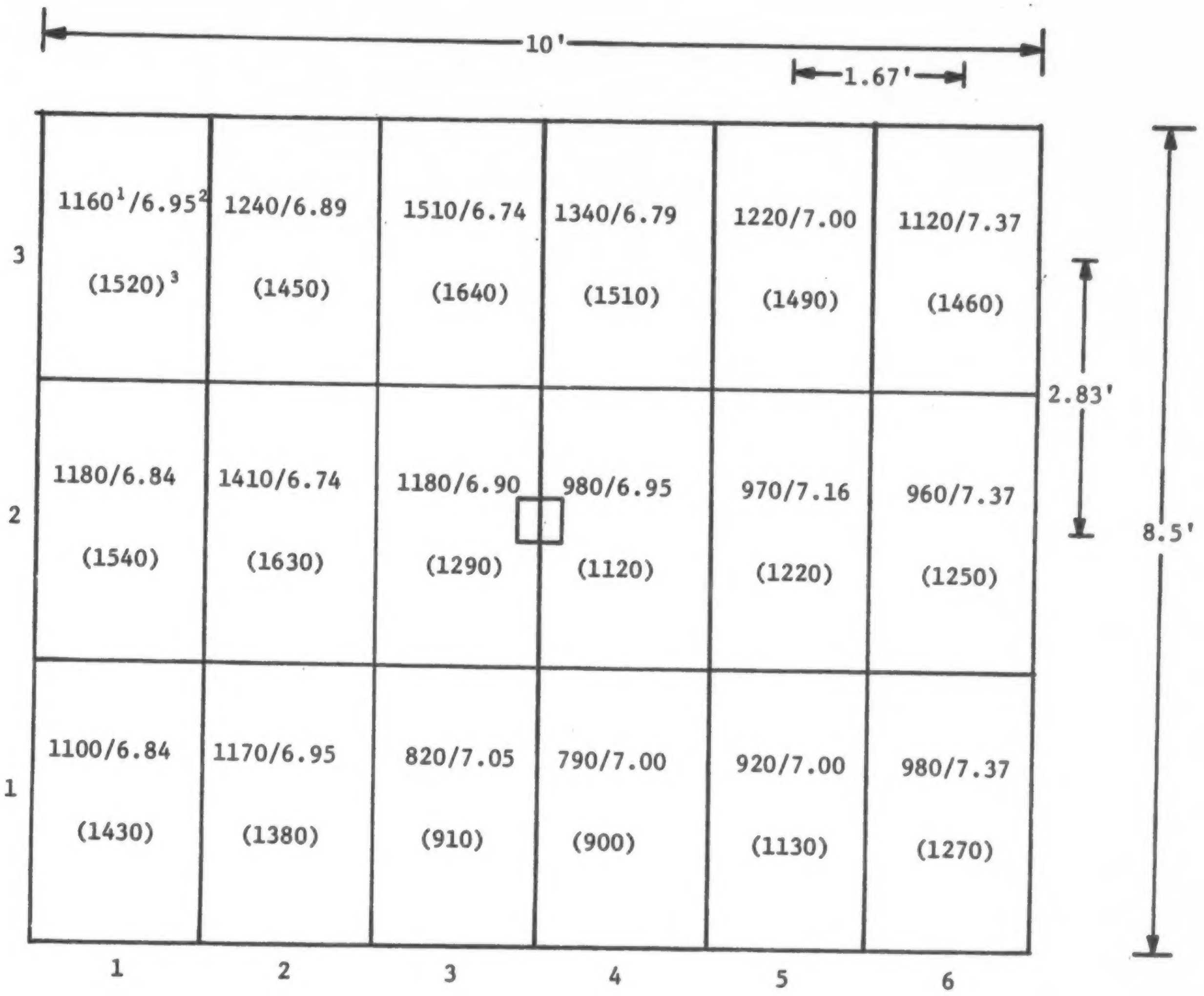
[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Outlet SO_2 Stratification Traverse (1-14-81)



	1	2	3	4	5	6
3	1160[1]/6.95[2] (1520)[3]	1240/6.89 (1450)	1510/6.74 (1640)	1340/6.79 (1510)	1220/7.00 (1490)	1120/7.37 (1460)
2	1180/6.84 (1540)	1410/6.74 (1630)	1180/6.90 (1290)	980/6.95 (1120)	970/7.16 (1220)	960/7.37 (1250)
1	1100/6.84 (1430)	1170/6.95 (1380)	820/7.05 (910)	790/7.00 (900)	920/7.00 (1130)	980/7.37 (1270)

Centroid Measurements	890/7.26 1100	970/6.84 1170	1130/6.94 1370	1100/6.90 1330	1040/7.16 1280	930/7.36 1160	970/7.26 1200

Centroid Average = 1230

Traverse Average = 1340

$$\text{Deviation} = \frac{1230-1340}{1340} = -8.2\%$$

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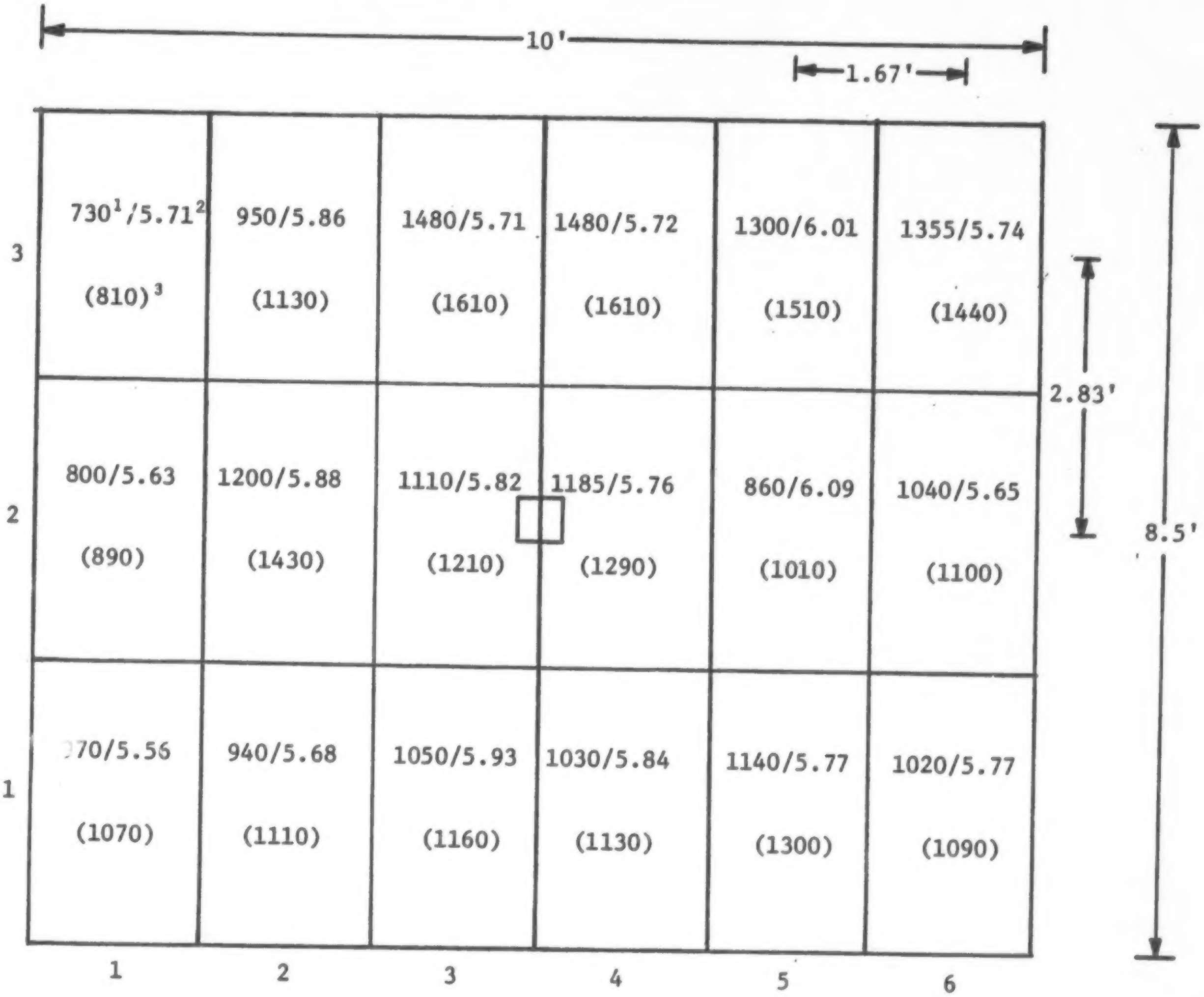
[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 Outlet SO_2 Stratification Traverse (1-10-81)



	1	2	3	4	5	6
3	730[1]/5.71[2] (810)[3]	950/5.86 (1130)	1480/5.71 (1610)	1480/5.72 (1610)	1300/6.01 (1510)	1355/5.74 (1440)
2	800/5.63 (890)	1200/5.88 (1430)	1110/5.82 (1210)	1185/5.76 (1290)	860/6.09 (1010)	1040/5.65 (1100)
1	970/5.56 (1070)	940/5.68 (1110)	1050/5.93 (1160)	1030/5.84 (1130)	1140/5.77 (1300)	1020/5.77 (1090)

Centroid Measurements	1110/5.73 1240	1030/6.00 1170	1120/6.02 1270	1090/6.02 1240	1060/6.12 1210	1160/5.78 1300

Centroid Average = 1240

Traverse Average = 1220

$$\text{Deviation} = \frac{1240-1220}{1220} = 1.6\%$$

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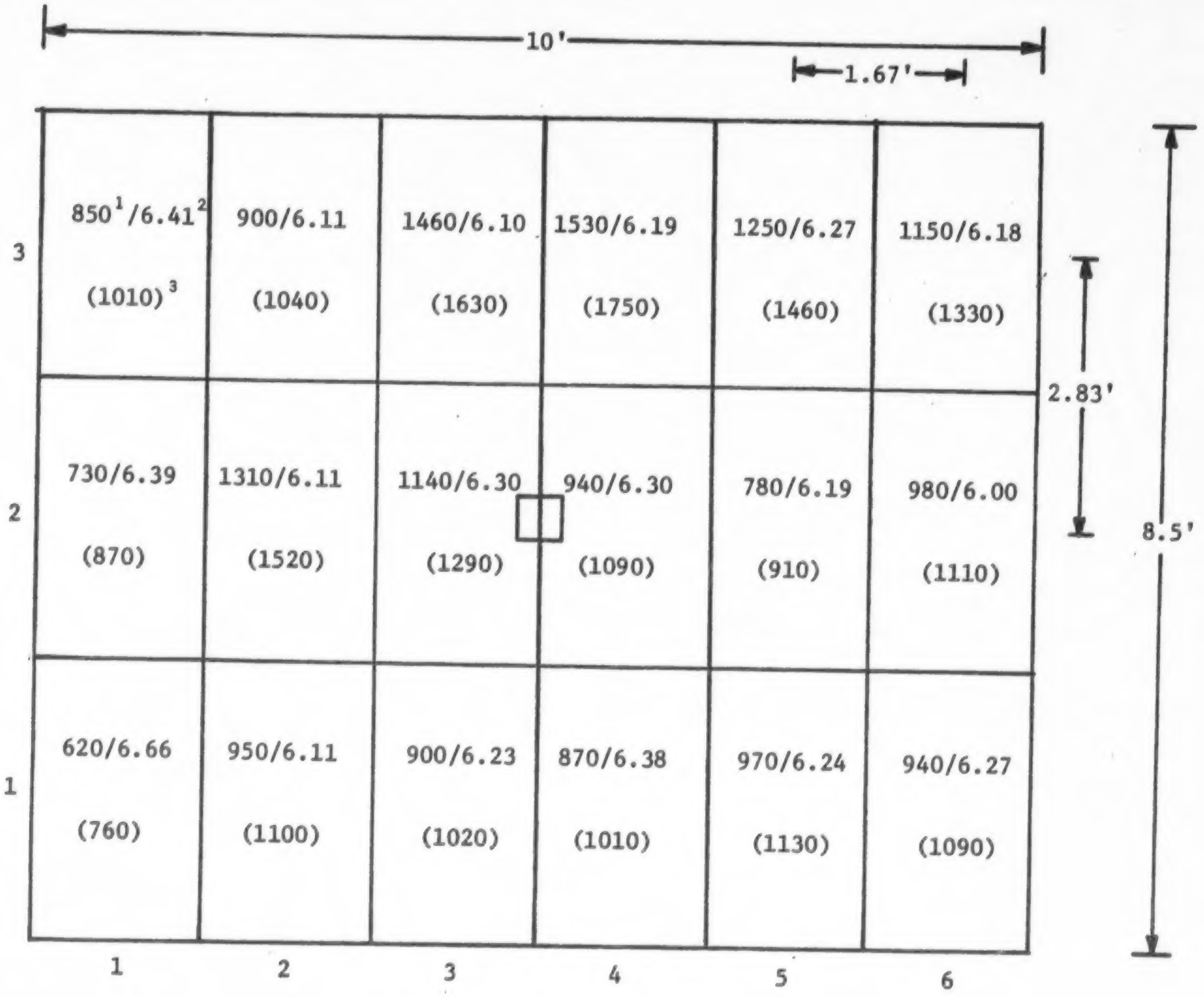
[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 Outlet SO_2 Stratification Traverse (1-14-81)



	1	2	3	4	5	6
3	850[1]/6.41[2] (1010)[3]	900/6.11 (1040)	1460/6.10 (1630)	1530/6.19 (1750)	1250/6.27 (1460)	1150/6.18 (1330)
2	730/6.39 (870)	1310/6.11 (1520)	1140/6.30 (1290)	940/6.30 (1090)	780/6.19 (910)	980/6.00 (1110)
1	620/6.66 (760)	950/6.11 (1100)	900/6.23 (1020)	870/6.38 (1010)	970/6.24 (1130)	940/6.27 (1090)

Centroid Measurements	1090/6.13 1250	1040/6.19 1180	1120/6.03 1270	1090/6.35 1270	1050/6.36 1220	1060/6.39 1230	1070/6.27 1240

Centroid Average = 1240

Traverse Average = 1170

Deviation = $\frac{1240-1170}{1170}$ = 6.0%

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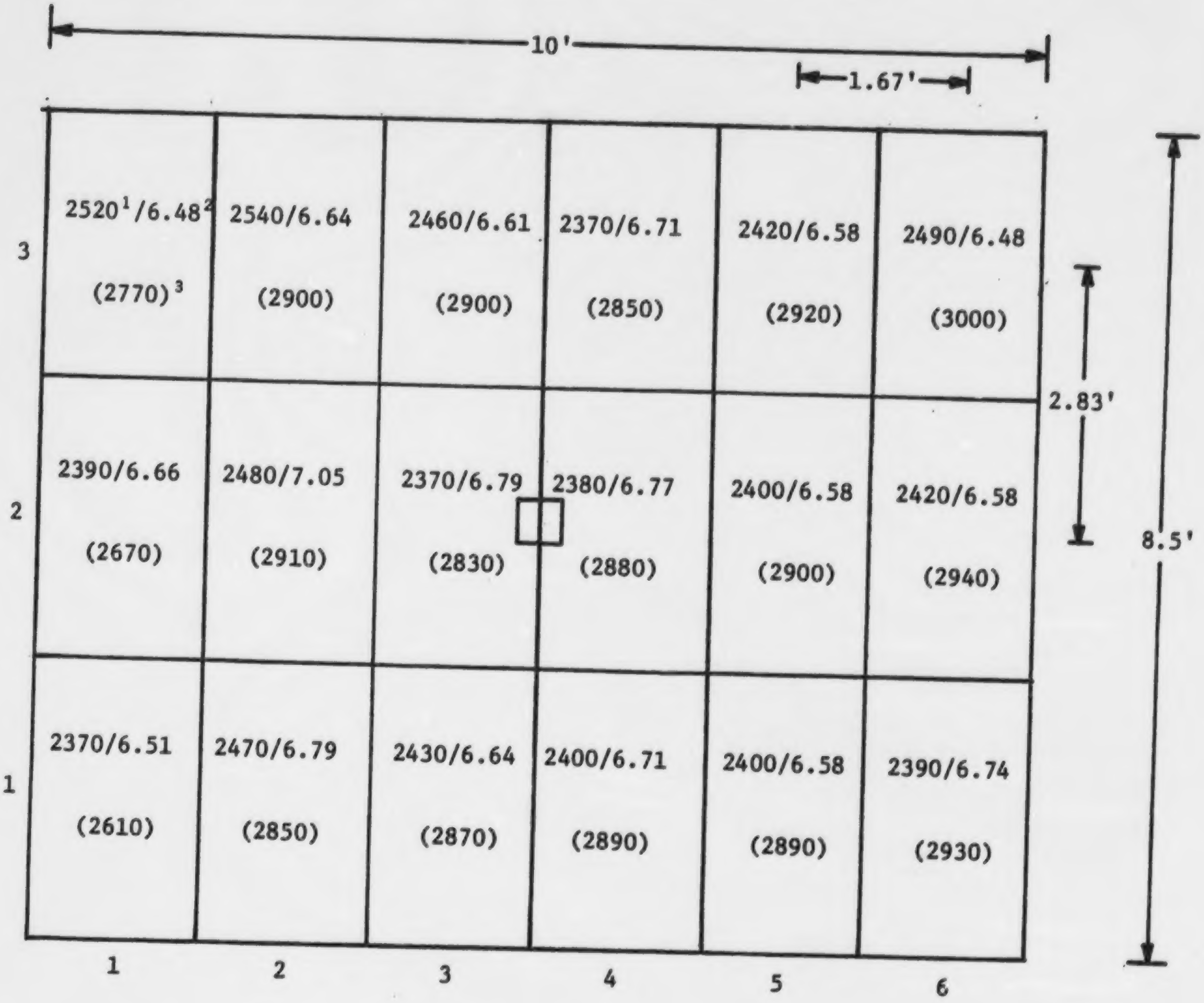
[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 Inlet SO_2 Stratification Traverse (1-16-81)



	1	2	3	4	5	6
3	2520[1]/6.48[2] (2770)[3]	2540/6.64 (2900)	2460/6.61 (2900)	2370/6.71 (2850)	2420/6.58 (2920)	2490/6.48 (3000)
2	2390/6.66 (2670)	2480/7.05 (2910)	2370/6.79 (2830)	2380/6.77 (2880)	2400/6.58 (2900)	2420/6.58 (2940)
1	2370/6.51 (2610)	2470/6.79 (2850)	2430/6.64 (2870)	2400/6.71 (2890)	2400/6.58 (2890)	2390/6.74 (2930)

Centroid Measurements	2710/6.11 3100	2500/6.56 2950	2420/6.77 2890	2340/7.13 2870	2330/7.00 2830	2340/6.95 2830

Centroid Average = 2910

Traverse Average = 2860

Deviation $= \frac{2910-2860}{2860} = 1.7\%$

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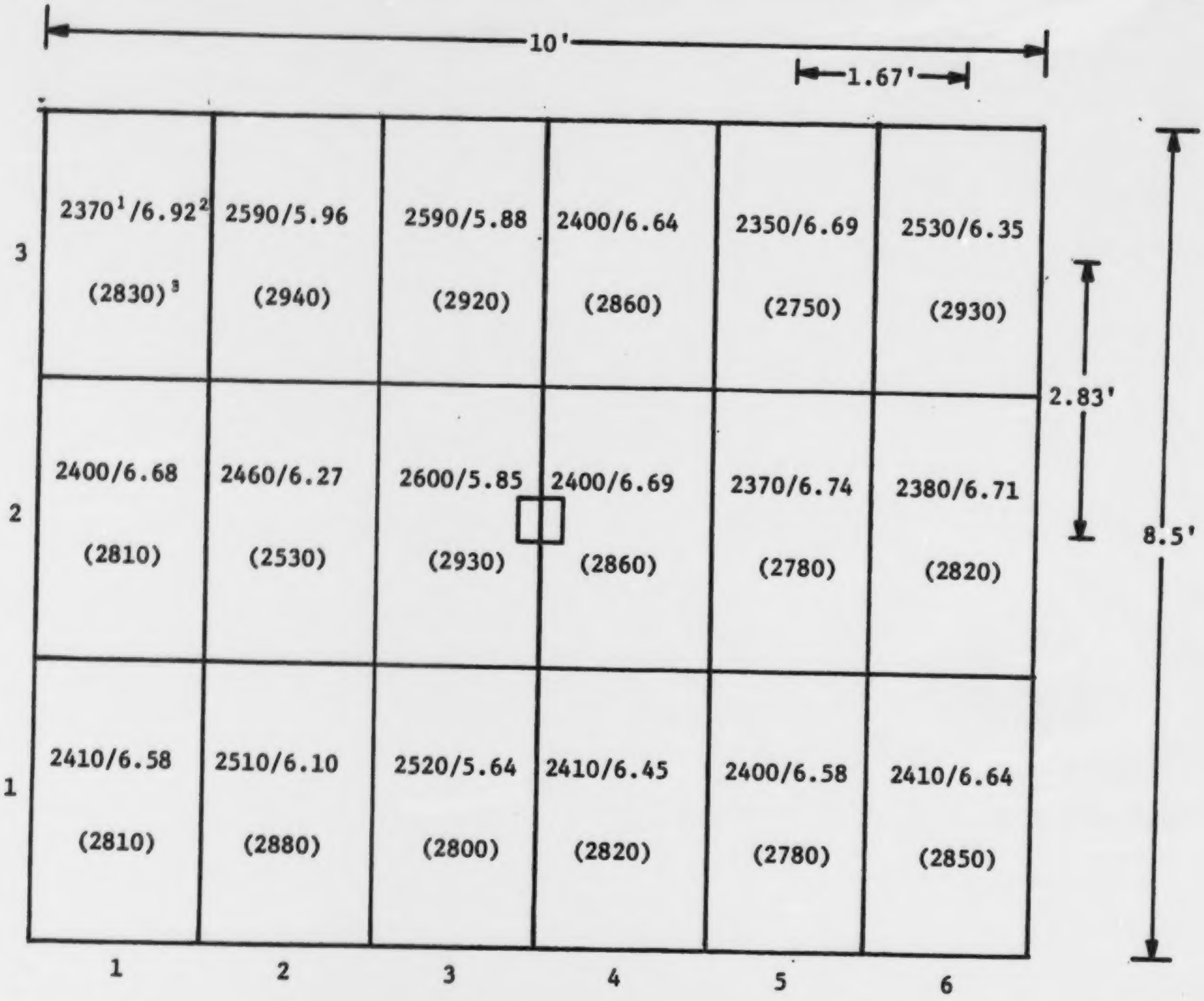
[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 Inlet SO_2 Stratification Traverse (1-16-81)



	1	2	3	4	5	6
3	2370[1]/6.92[2] (2830)[3]	2590/5.96 (2940)	2590/5.88 (2920)	2400/6.64 (2860)	2350/6.69 (2750)	2530/6.35 (2930)
2	2400/6.68 (2810)	2460/6.27 (2530)	2600/5.85 (2930)	2400/6.69 (2860)	2370/6.74 (2780)	2380/6.71 (2820)
1	2410/6.58 (2810)	2510/6.10 (2880)	2520/5.64 (2800)	2410/6.45 (2820)	2400/6.58 (2780)	2410/6.64 (2850)

Centroid Measurements	2390/6.40 2790	2520/5.96 2850	2440/6.11 2790	2480/6.27 2860	2620/5.64 2900	2480/5.85 2780

Centroid Average = 2830

Traverse Average = 2830

Deviation = $\frac{2830-2830}{2830} = 0\%$

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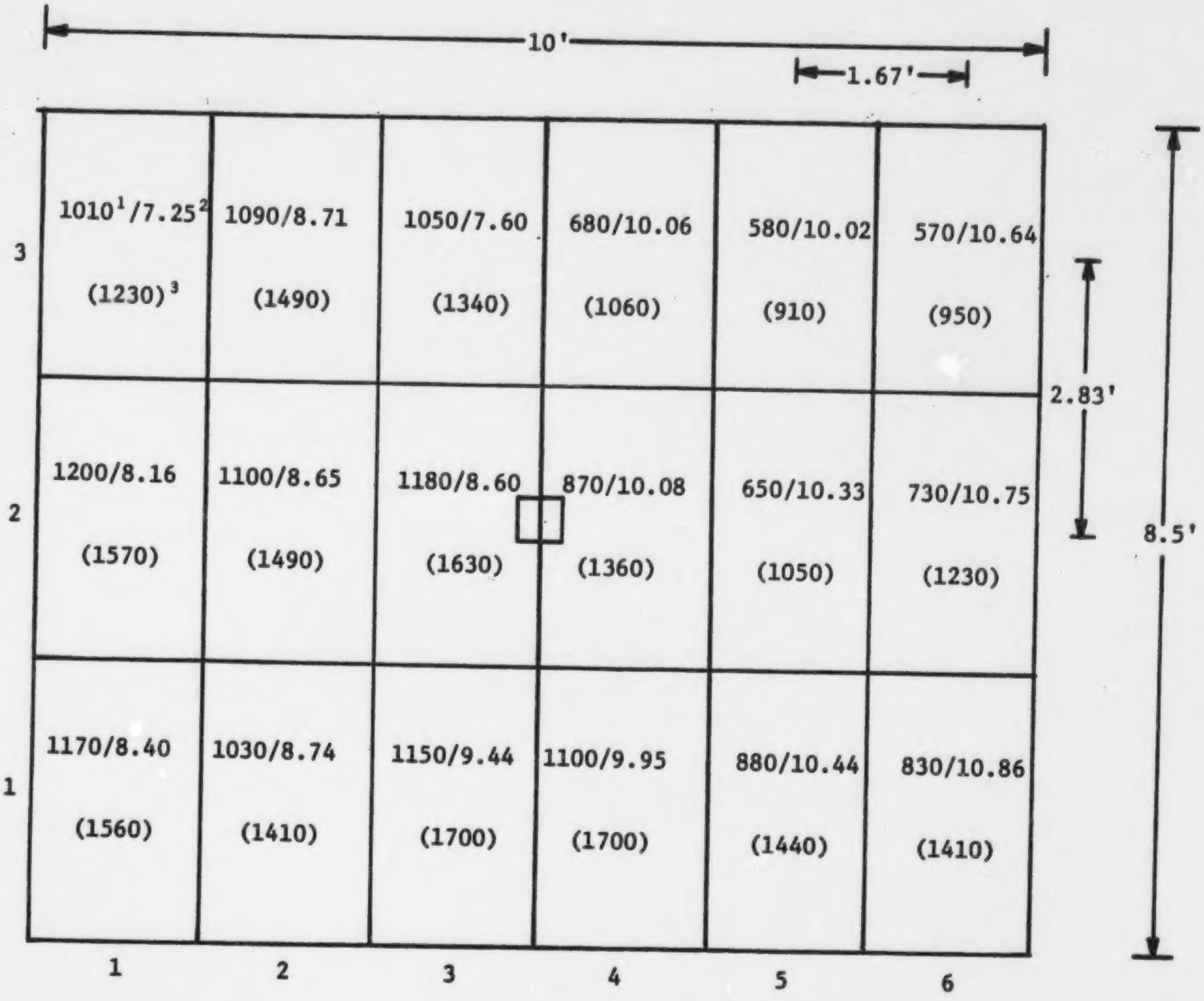
[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Outlet SO_2 Stratification Traverse (2-7-81)



	1	2	3	4	5	6
3	1010[1]/7.25[2] (1230)[3]	1090/8.71 (1490)	1050/7.60 (1340)	680/10.06 (1060)	580/10.02 (910)	570/10.64 (950)
2	1200/8.16 (1570)	1100/8.65 (1490)	1180/8.60 (1630)	870/10.08 (1360)	650/10.33 (1050)	730/10.75 (1230)
1	1170/8.40 (1560)	1030/8.74 (1410)	1150/9.44 (1700)	1100/9.95 (1700)	880/10.44 (1440)	830/10.86 (1410)

Centroid Measurements				
	1090/7.10 1330	1100/6.87 1330	1050/7.00 1280	1060/7.20 1310

Centroid Average = 1310

Traverse Average = 1360

$$\text{Deviation} = \frac{1310-1360}{1360} = -3.7\%$$

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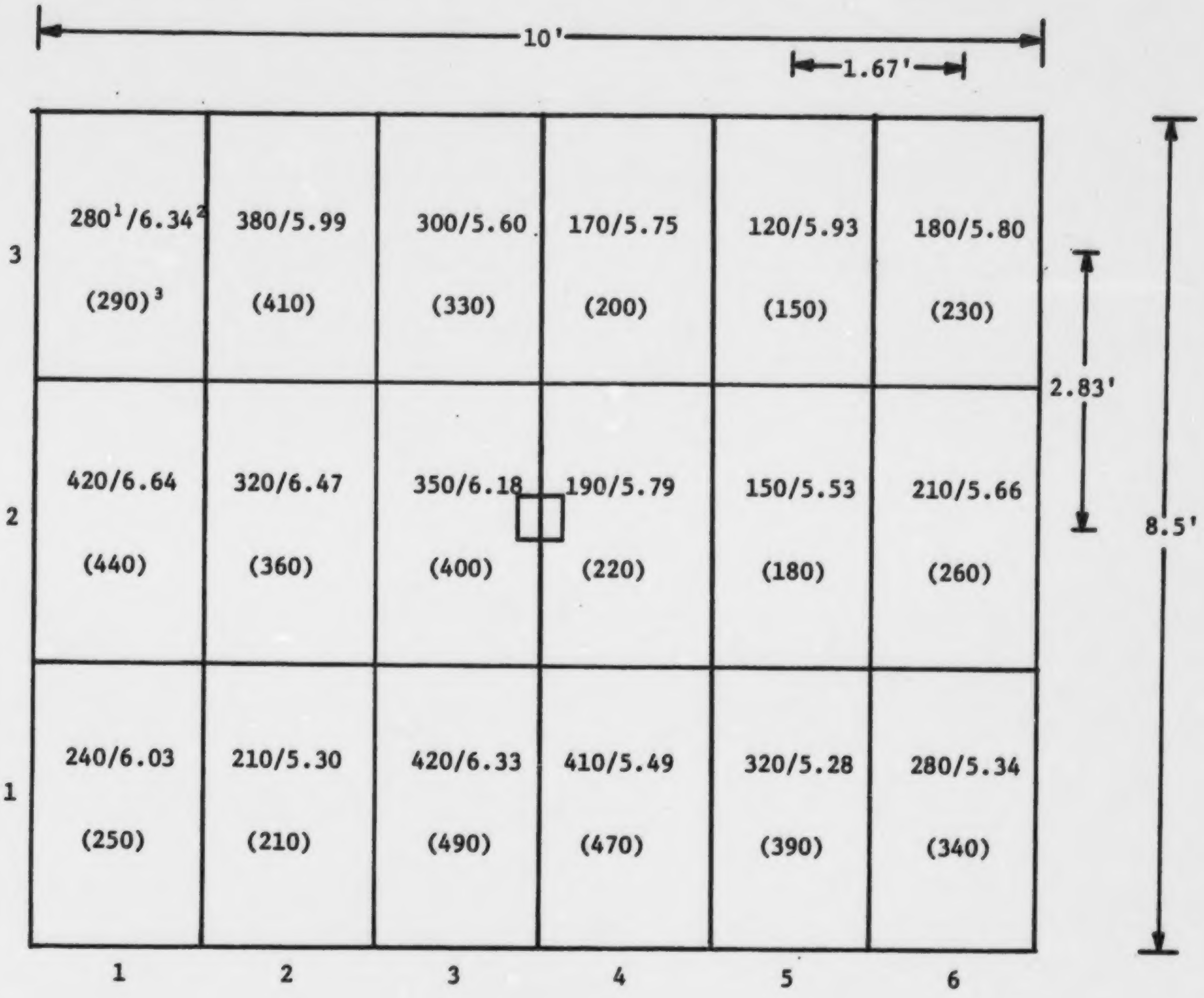
[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Outlet SO_2 Stratification Traverse (2-24-81)



	1	2	3	4	5	6
3	280[1]/6.34[2] (290)[3]	380/5.99 (410)	300/5.60 (330)	170/5.75 (200)	120/5.93 (150)	180/5.80 (230)
2	420/6.64 (440)	320/6.47 (360)	350/6.18 (400)	190/5.79 (220)	150/5.53 (180)	210/5.66 (260)
1	240/6.03 (250)	210/5.30 (210)	420/6.33 (490)	410/5.49 (470)	320/5.28 (390)	280/5.34 (340)

Centroid Measurements						
360/5.02 390	320/6.24 370	310/5.61 340	310/5.30 340	290/5.10 310	280/5.36 300	270/5.52 300

Centroid Average = 340

Traverse Average = 310

$$\text{Deviation} = \frac{340-310}{310} = 9.7\%$$

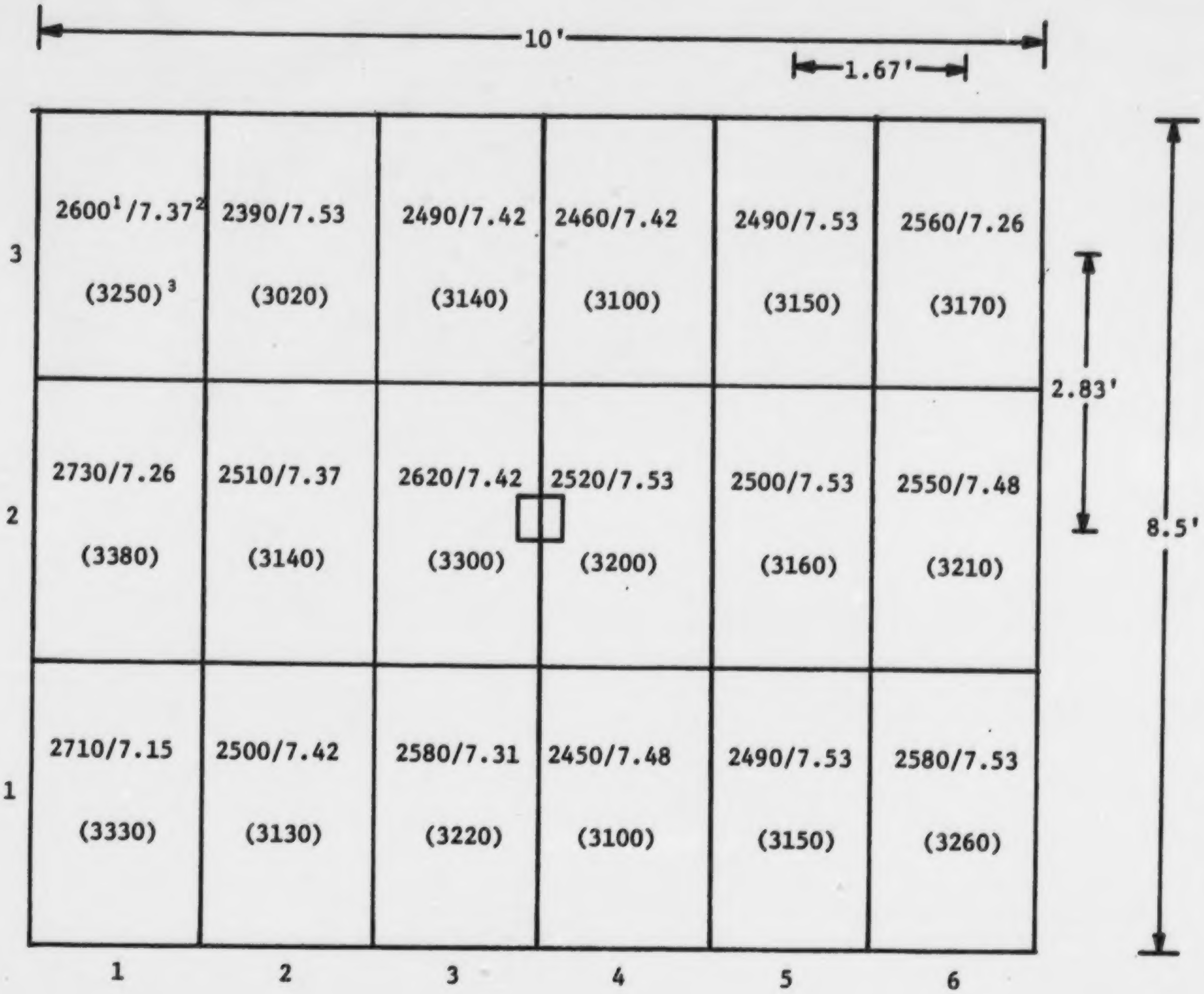
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Inlet (Traverse 1) SO_2 Stratification Traverse (3-1-81)



	1	2	3	4	5	6
3	2600[1]/7.37[2] (3250)[3]	2390/7.53 (3020)	2490/7.42 (3140)	2460/7.42 (3100)	2490/7.53 (3150)	2560/7.26 (3170)
2	2730/7.26 (3380)	2510/7.37 (3140)	2620/7.42 (3300)	2520/7.53 (3200)	2500/7.53 (3160)	2550/7.48 (3210)
1	2710/7.15 (3330)	2500/7.42 (3130)	2580/7.31 (3220)	2450/7.48 (3100)	2490/7.53 (3150)	2580/7.53 (3260)

Centroid Measurements	2470/7.39 3090	2430/7.15 3990	2490/7.15 3060	2440/7.26 3020

Centroid Average = 3040

Traverse Average = 3190

Deviation $= \frac{3040-3190}{3190} = -4.7\%$

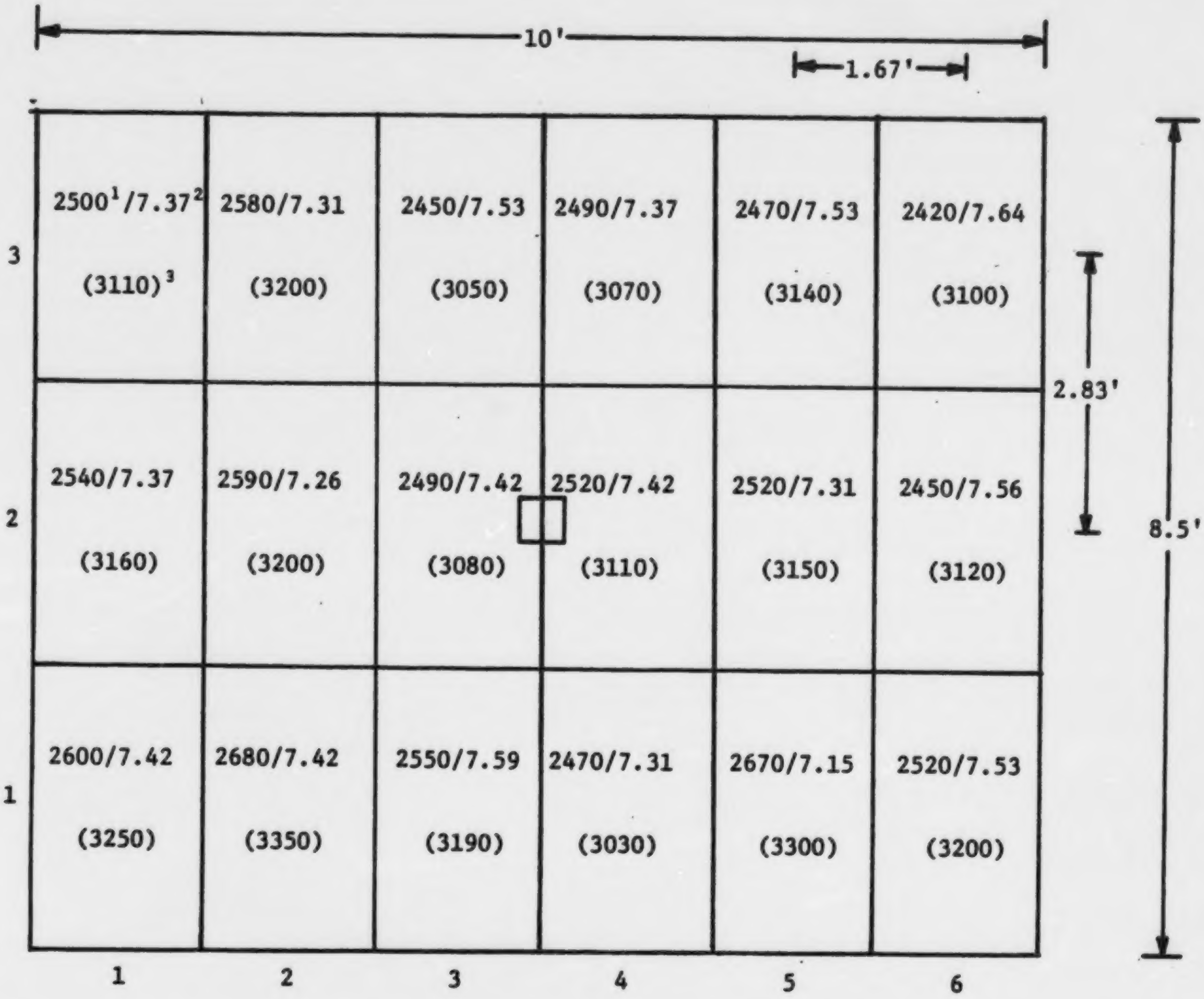
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Inlet (Traverse 2) SO_2 Stratification Traverse (3-1-81)



	1	2	3	4	5	6
3	2500[1]/7.37[2] (3110)[3]	2580/7.31 (3200)	2450/7.53 (3050)	2490/7.37 (3070)	2470/7.53 (3140)	2420/7.64 (3100)
2	2540/7.37 (3160)	2590/7.26 (3200)	2490/7.42 (3080)	2520/7.42 (3110)	2520/7.31 (3150)	2450/7.56 (3120)
1	2600/7.42 (3250)	2680/7.42 (3350)	2550/7.59 (3190)	2470/7.31 (3030)	2670/7.15 (3300)	2520/7.53 (3200)

Centroid Measurements	2460/7.15 3020	2510/7.37 3140	2470/7.37 3090	2440/7.26 3020

Centroid Average = 3070

Traverse Average = 3160

Deviation = $\frac{3070-3160}{3160} = -2.8\%$

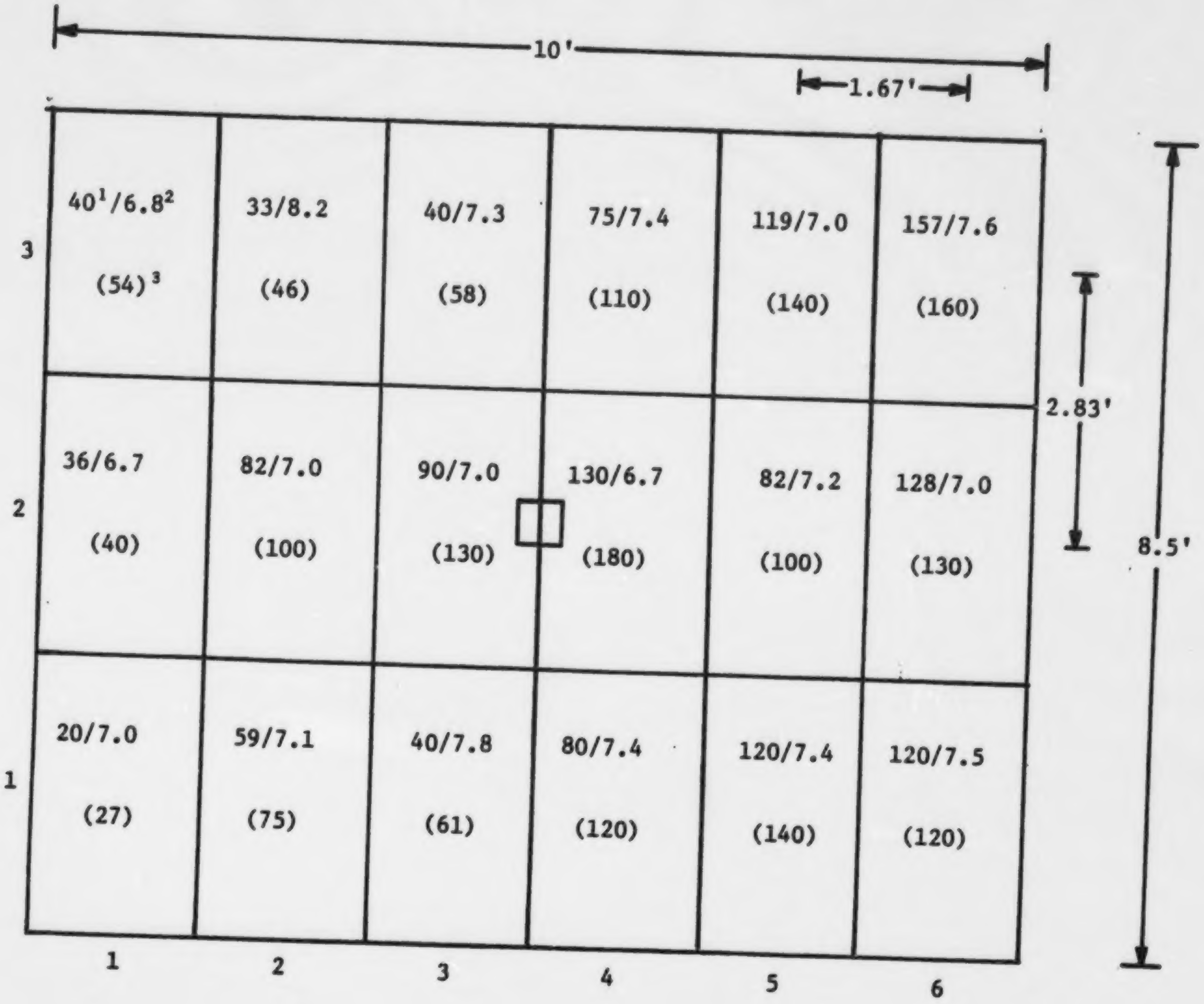
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 SO_2 Stratification Traverse (4-3-81)



	1	2	3	4	5	6
3	40[1]/6.8[2] (54)[3]	33/8.2 (46)	40/7.3 (58)	75/7.4 (110)	119/7.0 (140)	157/7.6 (160)
2	36/6.7 (40)	82/7.0 (100)	90/7.0 (130)	130/6.7 (180)	82/7.2 (100)	128/7.0 (130)
1	20/7.0 (27)	59/7.1 (75)	40/7.8 (61)	80/7.4 (120)	120/7.4 (140)	120/7.5 (120)

Centroid Measurements	94/6.5 (110)	120/6.0 (140)	110/6.9 (130)	90/7.2 (110)	102/6.3 (120)	140/7.1 (170)	140/7.3 (170)

Centroid Average = 140

Traverse Average = 100

Deviation = $\frac{140-100}{100}$ = 40%

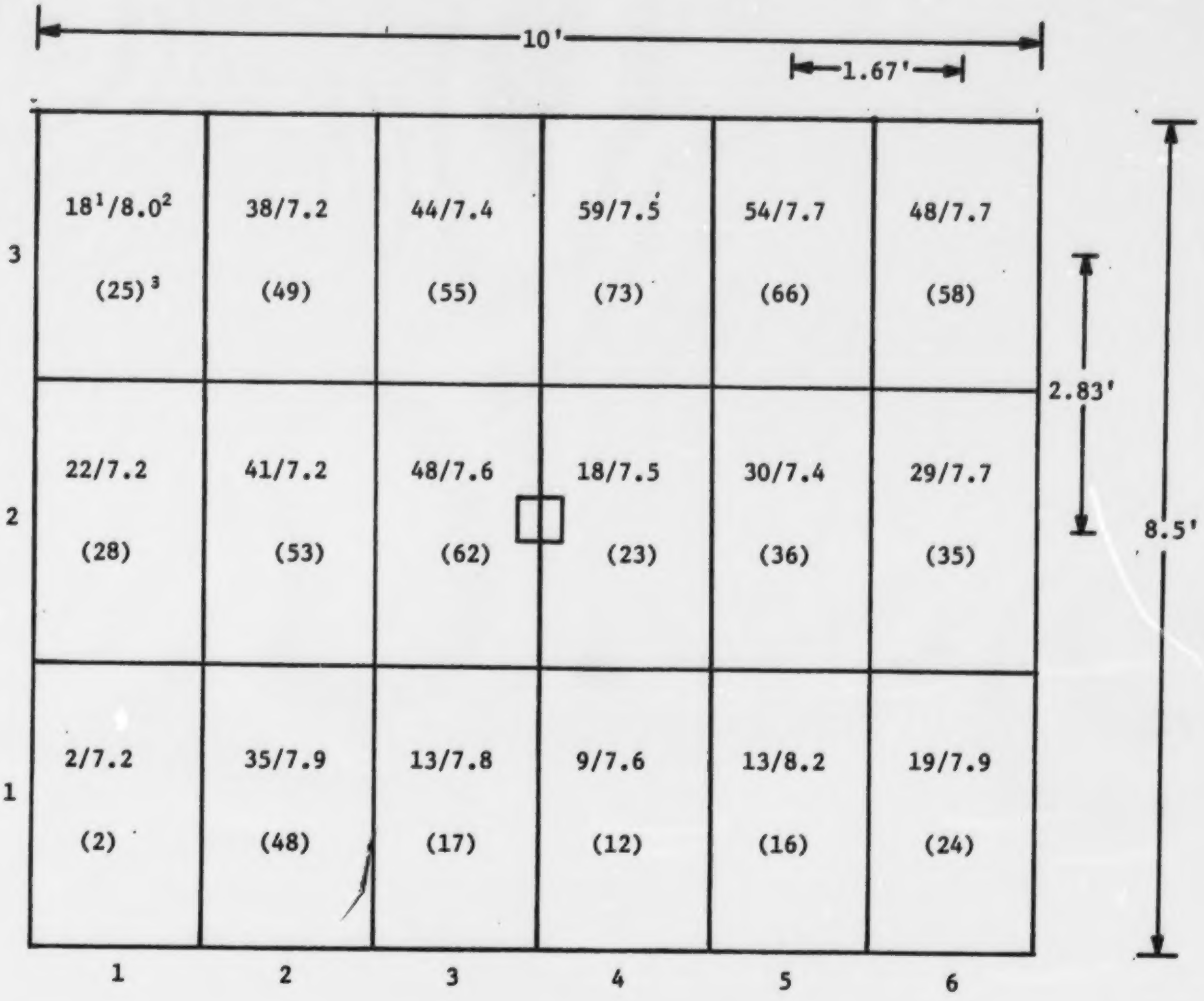
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 SO_2 Stratification Traverse (4-11-81)



	1	2	3	4	5	6
3	18[1]/8.0[2] (25)[3]	38/7.2 (49)	44/7.4 (55)	59/7.5 (73)	54/7.7 (66)	48/7.7 (58)
2	22/7.2 (28)	41/7.2 (53)	48/7.6 (62)	18/7.5 (23)	30/7.4 (36)	29/7.7 (35)
1	2/7.2 (2)	35/7.9 (48)	13/7.8 (17)	9/7.6 (12)	13/8.2 (16)	19/7.9 (24)

Centroid Measurements	48/7.0 (59)	46/7.1 (56)	48/7.0 (59)	51/6.6 (60)	51/6.9 (62)	52/7.2 (64)	51/7.2 (63)

Centroid Average = 60

Traverse Average = 38

Deviation = $\frac{60-38}{38}$ = 58%

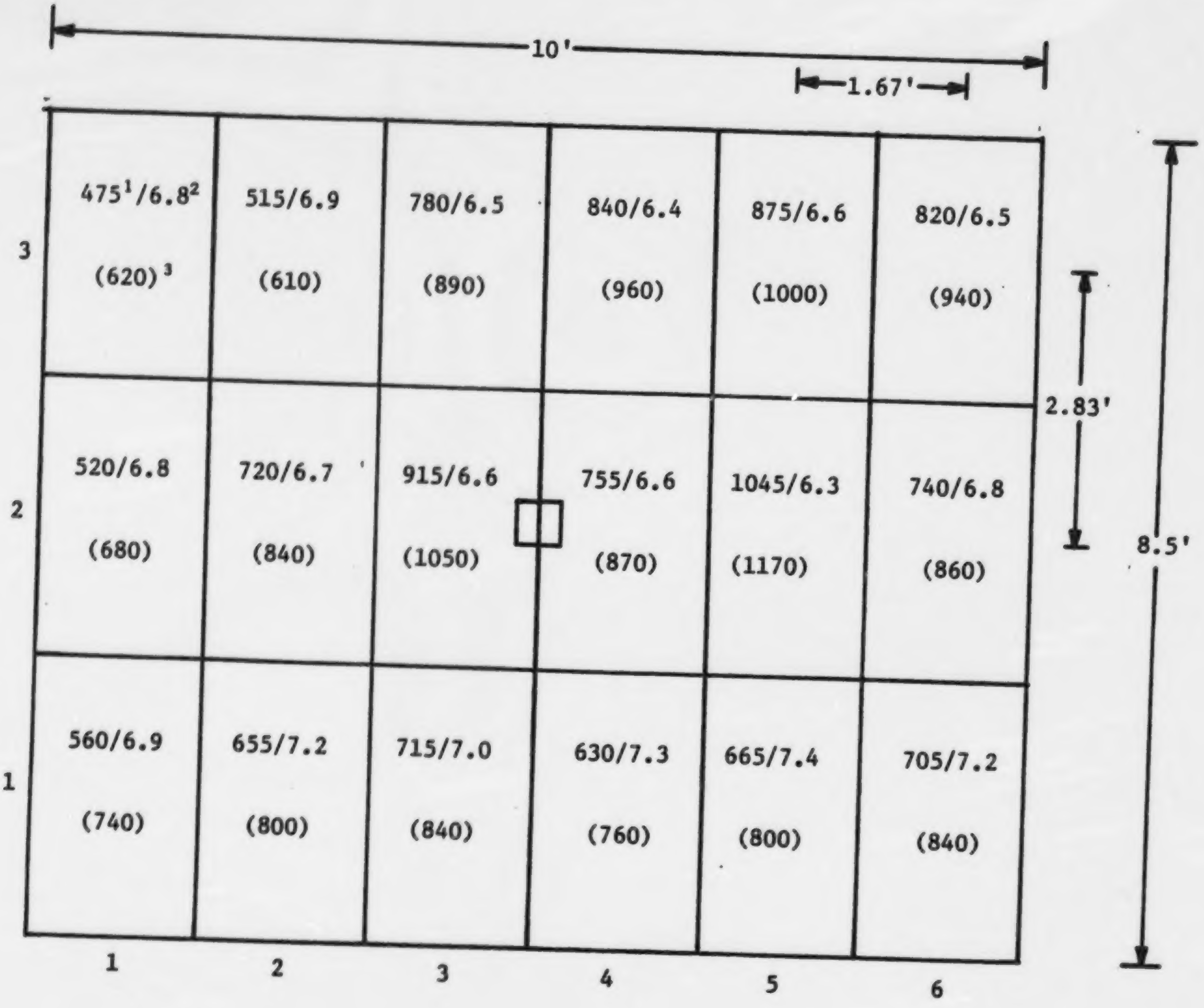
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 SO_2 Stratification Traverse (5-28-81)



	1	2	3	4	5	6
3	475[1]/6.8[2] (620)[3]	515/6.9 (610)	780/6.5 (890)	840/6.4 (960)	875/6.6 (1000)	820/6.5 (940)
2	520/6.8 (680)	720/6.7 (840)	915/6.6 (1050)	755/6.6 (870)	1045/6.3 (1170)	740/6.8 (860)
1	560/6.9 (740)	655/7.2 (800)	715/7.0 (840)	630/7.3 (760)	665/7.4 (800)	705/7.2 (840)

Centroid Measurements	735/6.6 (870)	850/6.4 (990)	910/6.3 (1055)	870/6.5 (1020)	890/6.6 (1050)	865/6.8 (1035)	850/7.1 (1040)

Centroid Average = 1010

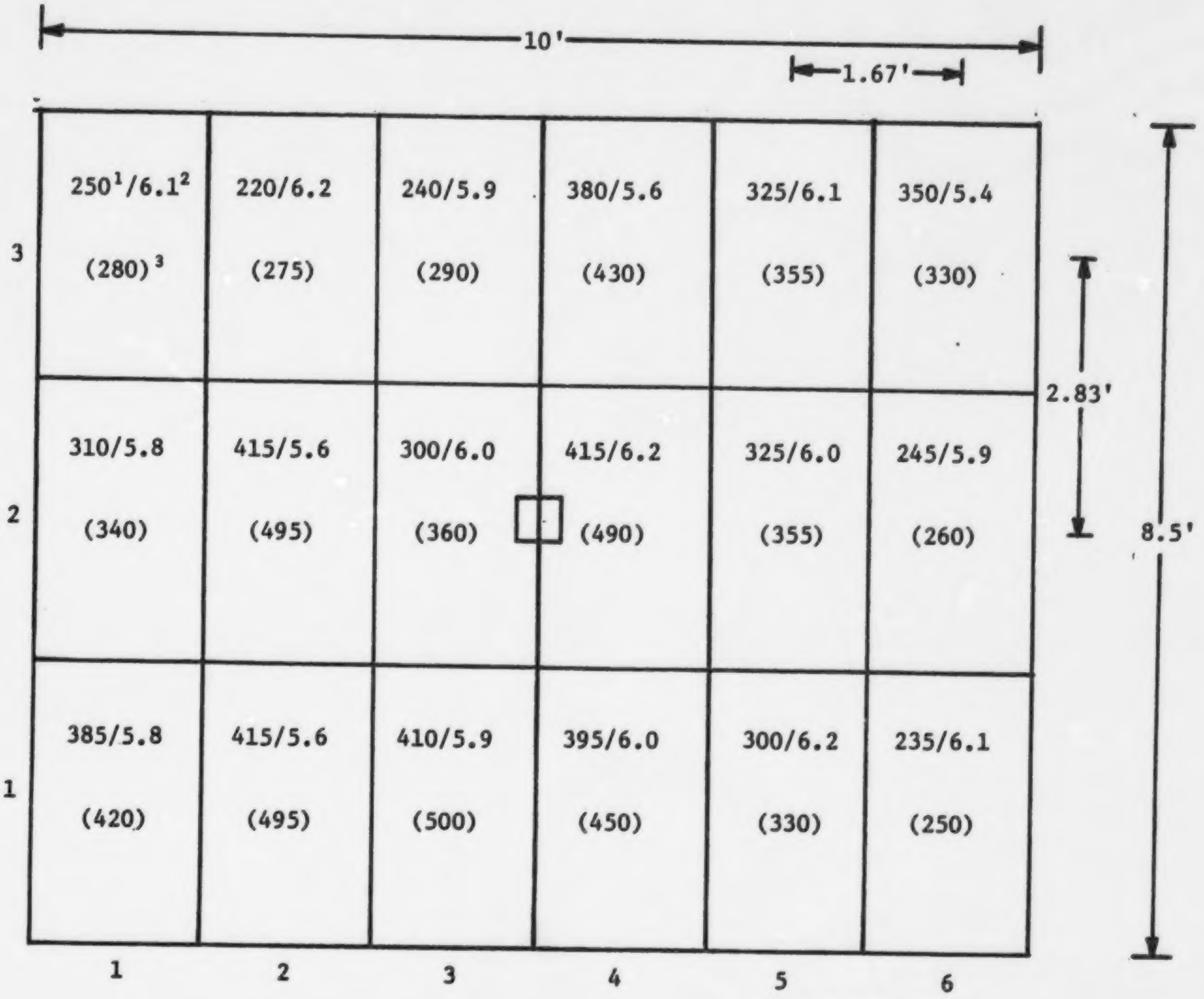
Traverse Average = 850

Deviation = $\frac{1010-850}{850}$ = 19%

---

[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 SO_2 Stratification Traverse (5-29-81)



	1	2	3	4	5	6
3	250[1]/6.1[2] (280)[3]	220/6.2 (275)	240/5.9 (290)	380/5.6 (430)	325/6.1 (355)	350/5.4 (330)
2	310/5.8 (340)	415/5.6 (495)	300/6.0 (360)	415/6.2 (490)	325/6.0 (355)	245/5.9 (260)
1	385/5.8 (420)	415/5.6 (495)	410/5.9 (500)	395/6.0 (450)	300/6.2 (330)	235/6.1 (250)

Centroid Measurements	440/5.9 (495)	395/6.1 (450)	360/5.8 (405)	405/5.7 (450)	410/6.1 (470)	435/5.9 (490)	465/5.8 (520)

Centroid Average = 470

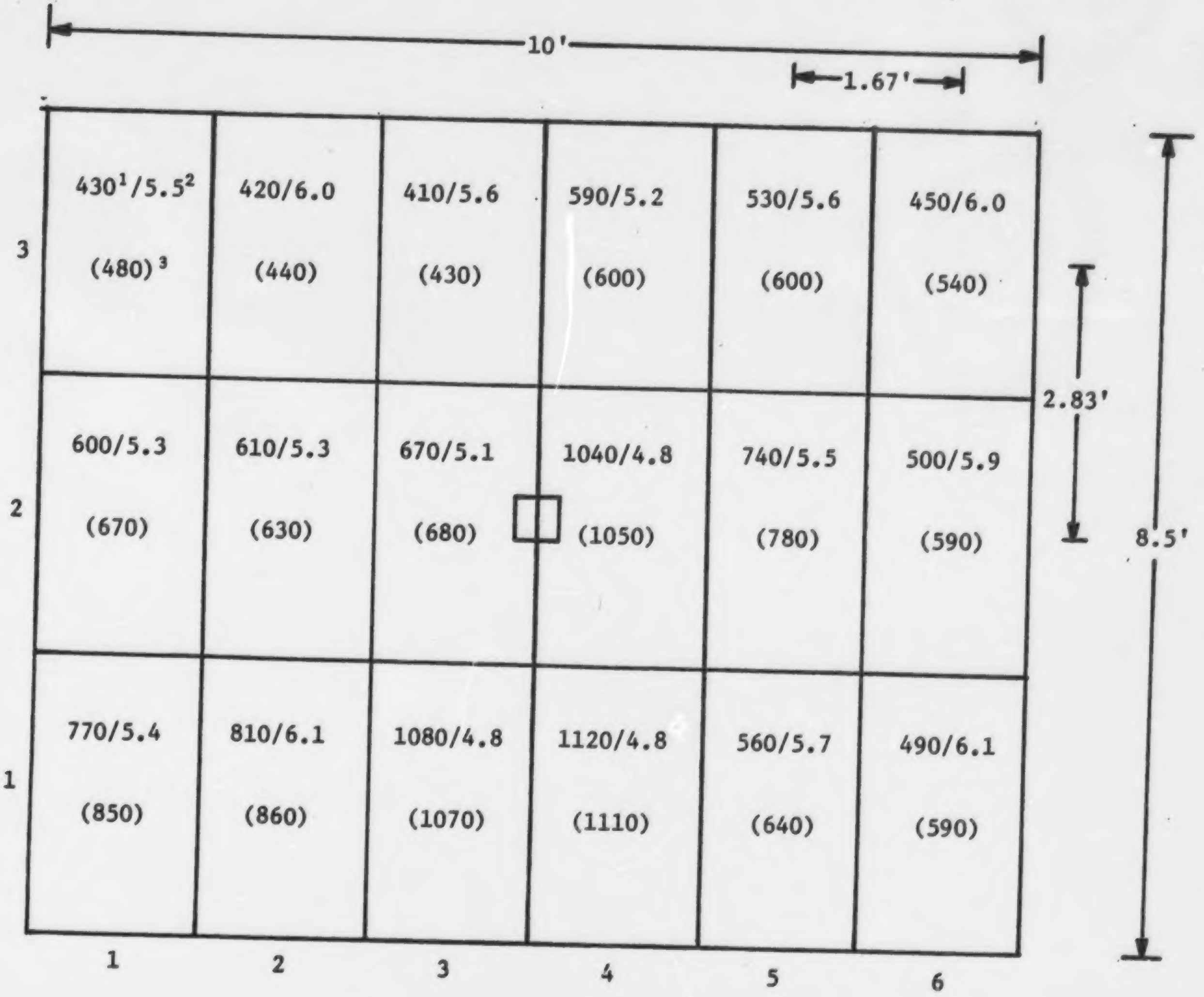
Traverse Average = 370

Deviation $= \frac{470-370}{370} = 27\%$

---

[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 SO_2 Stratification Traverse (6-3-81)



	1	2	3	4	5	6
3	430[1]/5.5[2] (480)[3]	420/6.0 (440)	410/5.6 (430)	590/5.2 (600)	530/5.6 (600)	450/6.0 (540)
2	600/5.3 (670)	610/5.3 (630)	670/5.1 (680)	1040/4.8 (1050)	740/5.5 (780)	500/5.9 (590)
1	770/5.4 (850)	810/6.1 (860)	1080/4.8 (1070)	1120/4.8 (1110)	560/5.7 (640)	490/6.1 (590)

Centroid Measurements	720/5.2 (780)	830/5.6 (920)	830/5.6 (920)	820/5.2 (890)	840/5.3 (910)	780/5.7 (870)	680/5.8 (760)

Centroid Average = 860

Traverse Average = 720

$$\text{Deviation} = \frac{860-720}{720} = 19\%$$

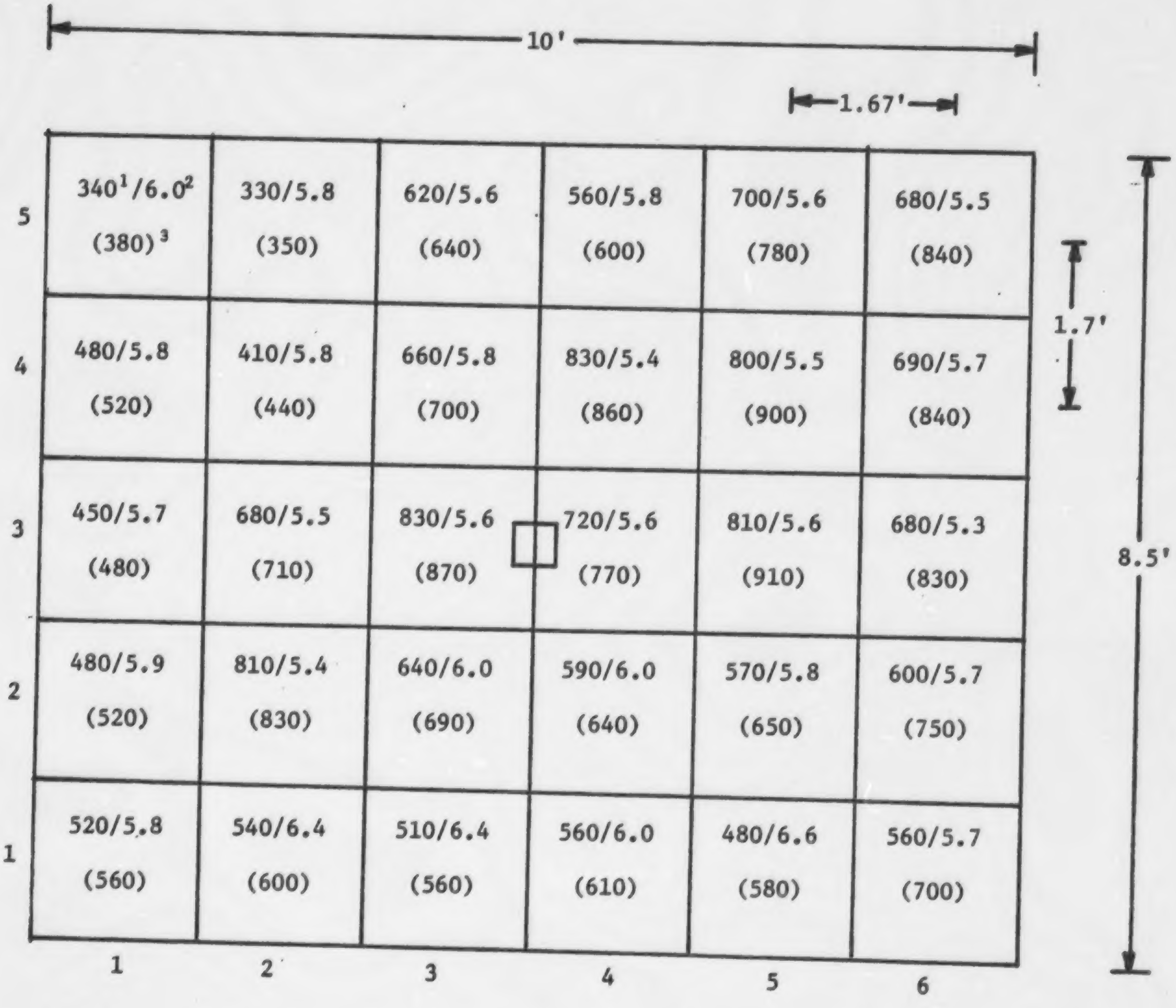
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 SO_2 Stratification Traverse (6-4-81)



	1	2	3	4	5	6
5	340[1]/6.0[2] (380)[3]	330/5.8 (350)	620/5.6 (640)	560/5.8 (600)	700/5.6 (780)	680/5.5 (840)
4	480/5.8 (520)	410/5.8 (440)	660/5.8 (700)	830/5.4 (860)	800/5.5 (900)	690/5.7 (840)
3	450/5.7 (480)	680/5.5 (710)	830/5.6 (870)	720/5.6 (770)	810/5.6 (910)	680/5.3 (830)
2	480/5.9 (520)	810/5.4 (830)	640/6.0 (690)	590/6.0 (640)	570/5.8 (650)	600/5.7 (750)
1	520/5.8 (560)	540/6.4 (600)	510/6.4 (560)	560/6.0 (610)	480/6.6 (580)	560/5.7 (700)

Centroid Measurements	775/5.3 (840)	770/5.9 (870)	770/6.0 (870)	760/6.4 (890)	740/6.0 (840)	740/5.0 (790)	610/6.0 (690)

Centroid Average = 830

Traverse Average = 670

$$\text{Deviation} = \frac{830-670}{670} = 24\%$$

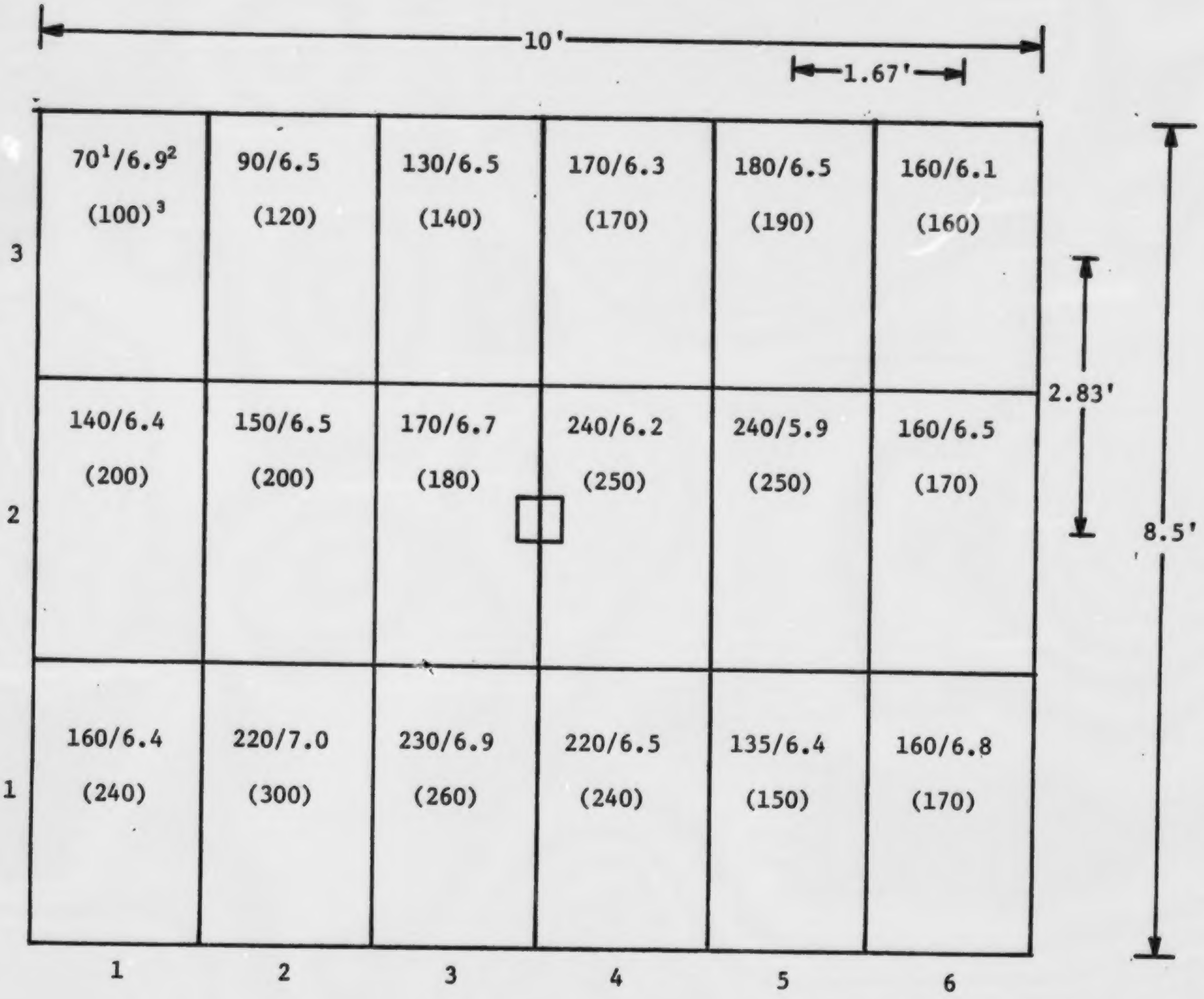
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference).

S-2 SO_2 Stratification Traverse (6-26-81)



	1	2	3	4	5	6
3	70[1]/6.9[2] (100)[3]	90/6.5 (120)	130/6.5 (140)	170/6.3 (170)	180/6.5 (190)	160/6.1 (160)
2	140/6.4 (200)	150/6.5 (200)	170/6.7 (180)	240/6.2 (250)	240/5.9 (250)	160/6.5 (170)
1	160/6.4 (240)	220/7.0 (300)	230/6.9 (260)	220/6.5 (240)	135/6.4 (150)	160/6.8 (170)

Centroid Measurements	205/6.7 (240)	149/6.7 (180)	235/6.9 (280)	250/6.2 (290)	230/6.6 (280)	240/6.8 (290)	240/6.3 (280)

Centroid Average = 260

Traverse Average = 200

$$\text{Deviation} = \frac{260-200}{200} = 30\%$$

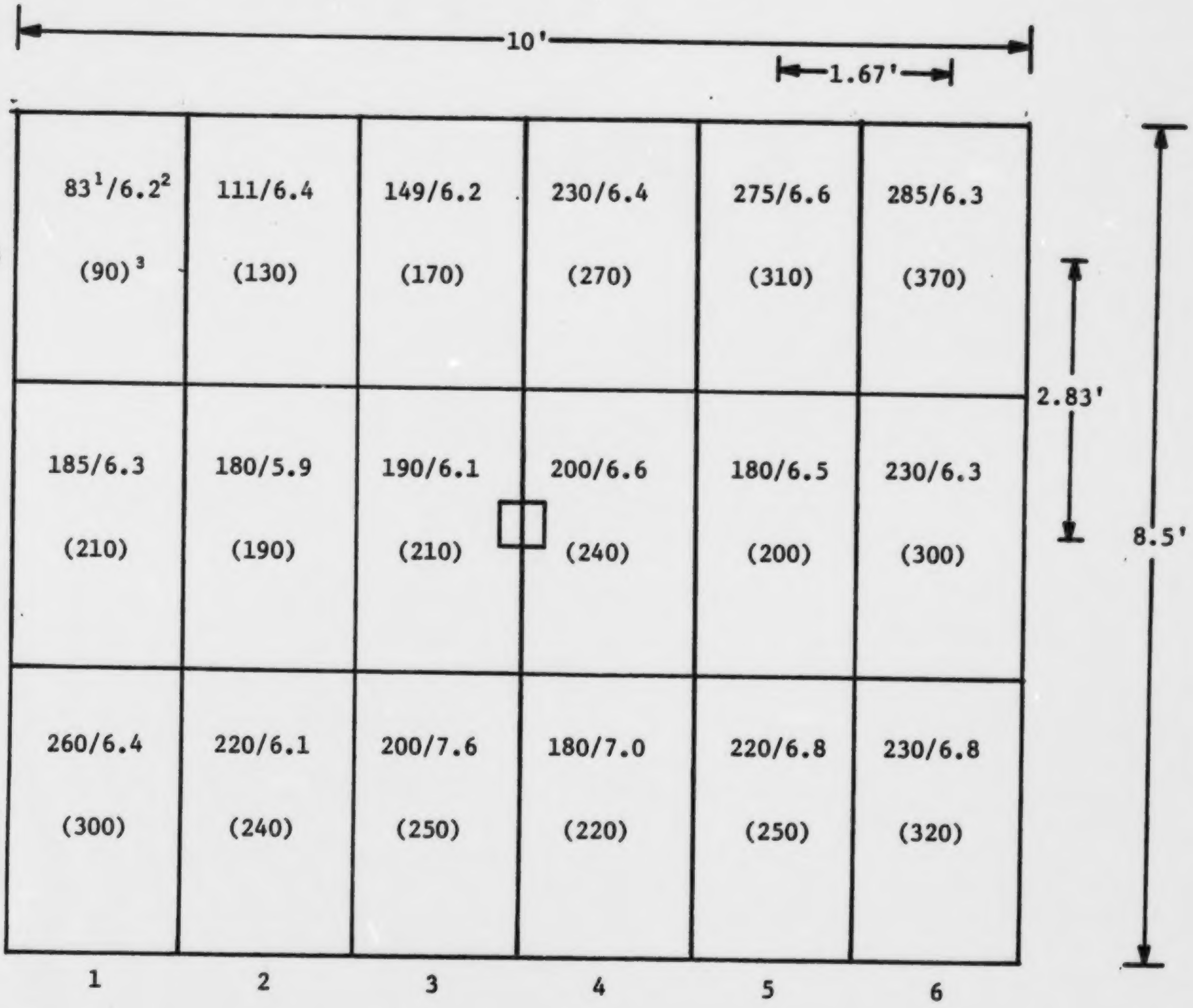
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 SO_2 Stratification Traverse (7-3-81)



	1	2	3	4	5	6
3	83[1]/6.2[2] (90)[3]	111/6.4 (130)	149/6.2 (170)	230/6.4 (270)	275/6.6 (310)	285/6.3 (370)
2	185/6.3 (210)	180/5.9 (190)	190/6.1 (210)	200/6.6 (240)	180/6.5 (200)	230/6.3 (300)
1	260/6.4 (300)	220/6.1 (240)	200/7.6 (250)	180/7.0 (220)	220/6.8 (250)	230/6.8 (320)

Centroid Measurements	220/7.1 (270)	220/7.3 (280)	230/6.9 (280)	216/6.8 (260)	230/7.8 (290)	230/6.5 (270)	180/6.6 (210)

Centroid Average = 270

Traverse Average = 240

$$\text{Deviation} = \frac{270-240}{240} = 12\%$$

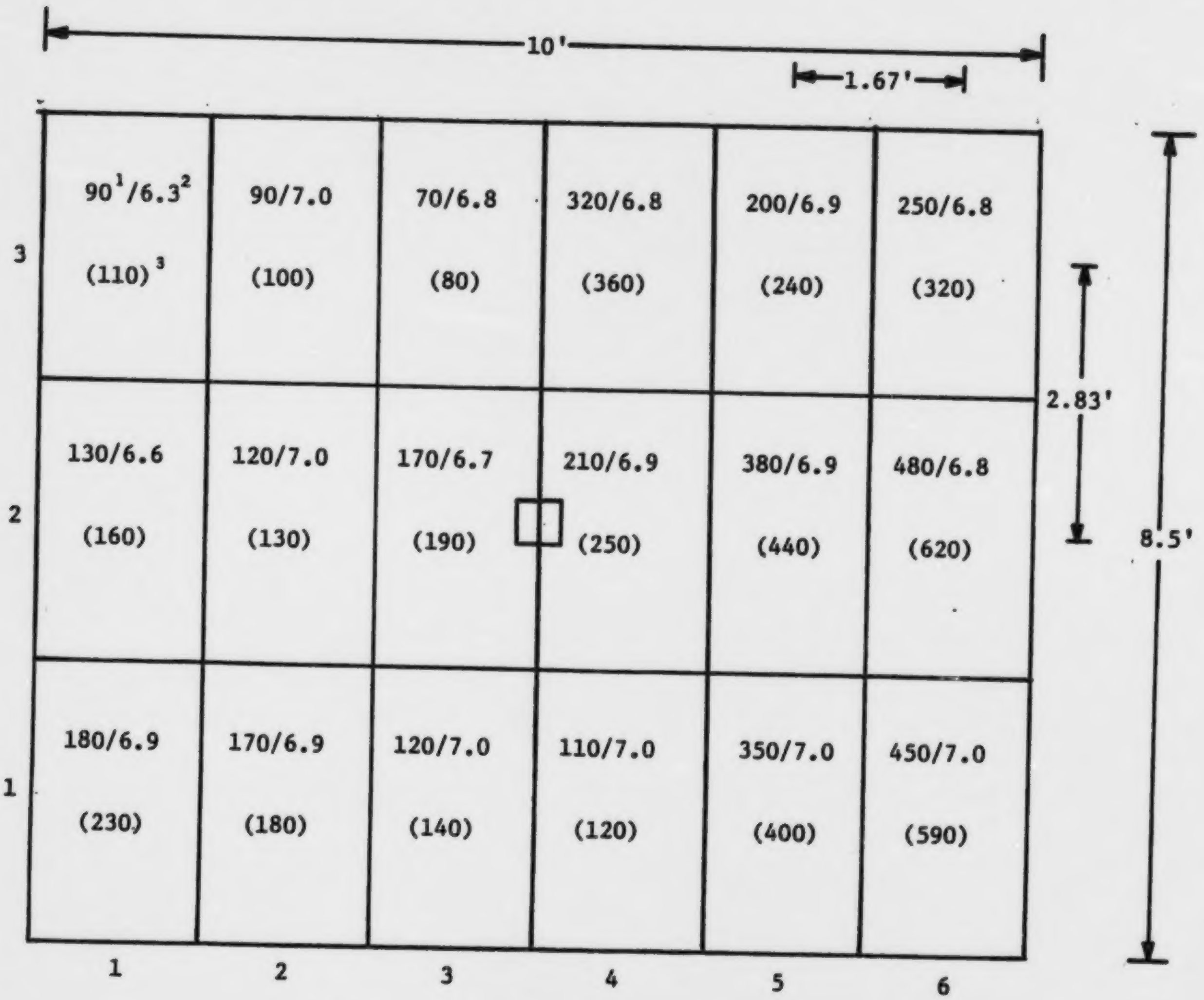
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 SO_2 Stratification Traverse (7-21-81)



	1	2	3	4	5	6
3	90[1]/6.3[2] (110)[3]	90/7.0 (100)	70/6.8 (80)	320/6.8 (360)	200/6.9 (240)	250/6.8 (320)
2	130/6.6 (160)	120/7.0 (130)	170/6.7 (190)	210/6.9 (250)	380/6.9 (440)	480/6.8 (620)
1	180/6.9 (230)	170/6.9 (180)	120/7.0 (140)	110/7.0 (120)	350/7.0 (400)	450/7.0 (590)

Centroid Measurements	230/6.9 (280)	310/7.3 (380)	320/7.4 (400)	310/6.5 (360)	310/6.7 (370)	300/7.1 (360)	240/7.2 (290)

Centroid Average = 350

Traverse Average = 260

Deviation = $\frac{350-260}{260} \approx 35\%$

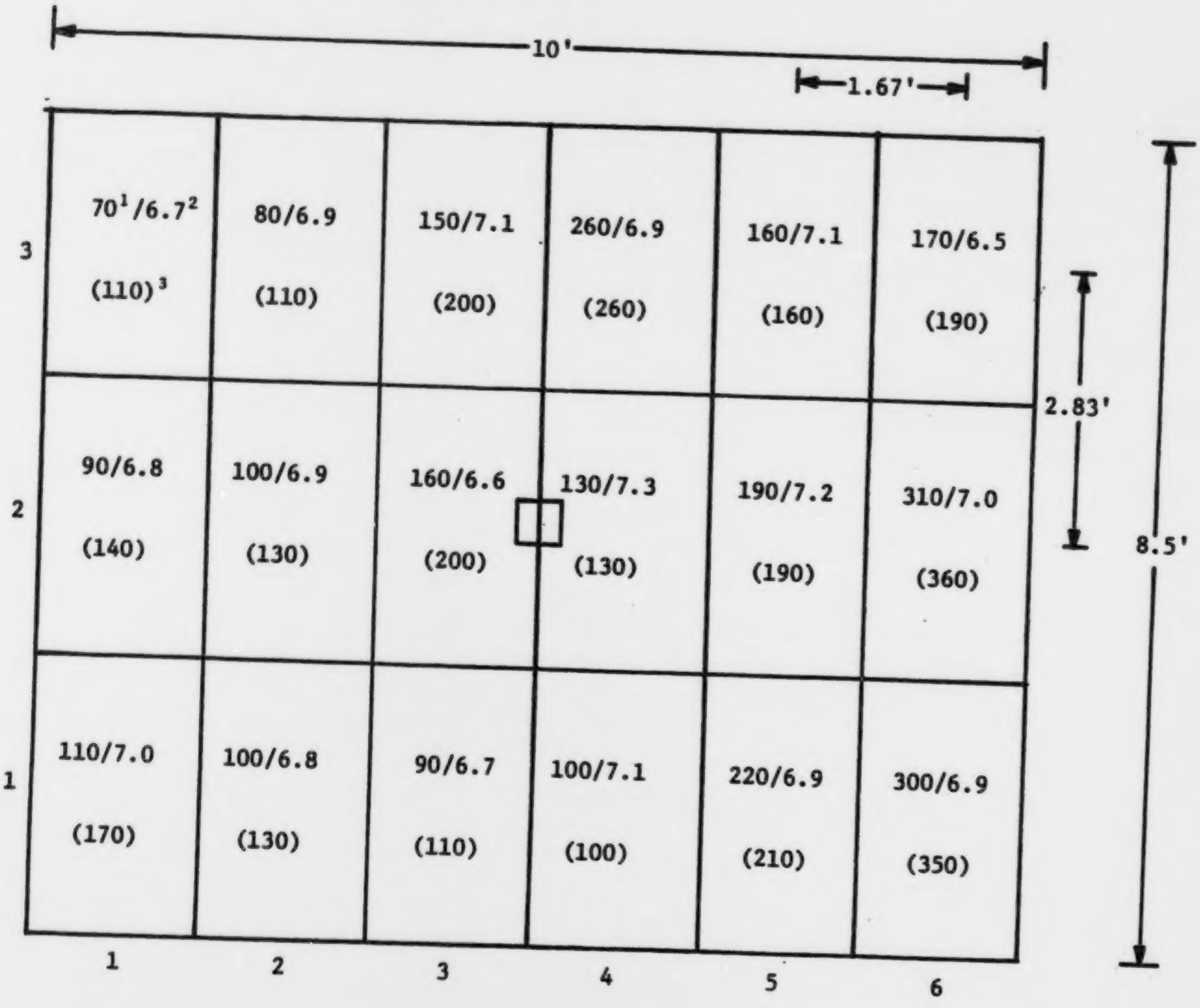
---

[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Outlet SO_2 Stratification Traverse (8-8-81)
Pump 1.2 only



	1	2	3	4	5	6
3	70[1]/6.7[2] (110)[3]	80/6.9 (110)	150/7.1 (200)	260/6.9 (260)	160/7.1 (160)	170/6.5 (190)
2	90/6.8 (140)	100/6.9 (130)	160/6.6 (200)	130/7.3 (130)	190/7.2 (190)	310/7.0 (360)
1	110/7.0 (170)	100/6.8 (130)	90/6.7 (110)	100/7.1 (100)	220/6.9 (210)	300/6.9 (350)

Centroid Measurements	130/7.2 160	150/7.0 180	180/7.0 220	160/7.0 190	280/6.9 340	170/7.0 210	200/7.11 250

Centroid Average = 220

Traverse Average = 180

$$\text{Deviation} = \frac{220-180}{180} = 22.2\%$$

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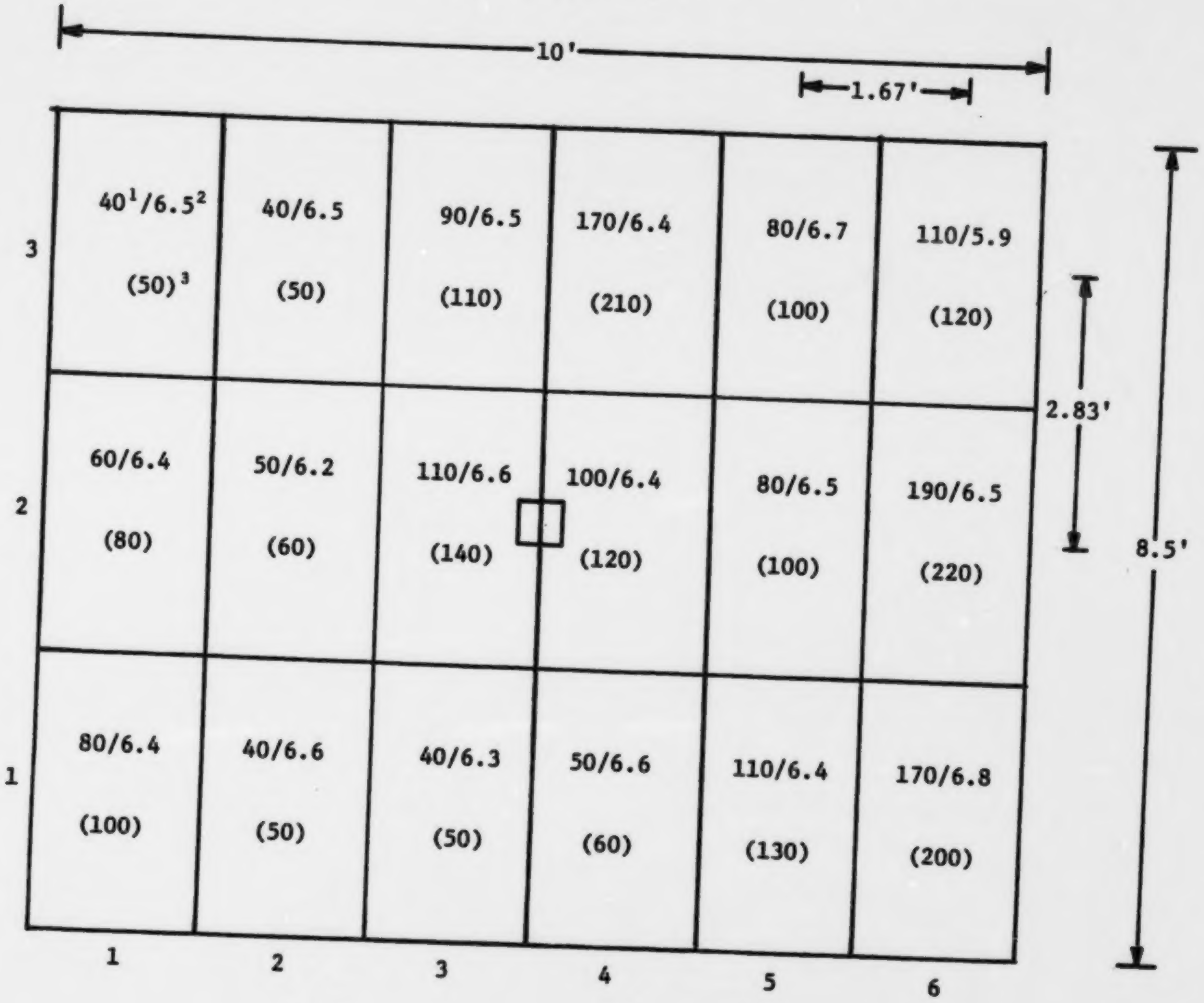
[1] SO_2 as measured (ppm)

[2] O_2 as measured (%)

[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Outlet SO_2 Stratification Traverse (8-8-81)
Pumps 1.1 and 1.2



	1	2	3	4	5	6
3	40[1]/6.5[2] (50)[3]	40/6.5 (50)	90/6.5 (110)	170/6.4 (210)	80/6.7 (100)	110/5.9 (120)
2	60/6.4 (80)	50/6.2 (60)	110/6.6 (140)	100/6.4 (120)	80/6.5 (100)	190/6.5 (220)
1	80/6.4 (100)	40/6.6 (50)	40/6.3 (50)	50/6.6 (60)	110/6.4 (130)	170/6.8 (200)

Centroid Measurements	90/6.4 100	100/6.5 120	100/6.6 120	90/6.7 110	100/6.5 120	90/6.8 110	110/6.5 130

Centroid Average = 120

Traverse Average = 110

Deviation $= \frac{120-110}{110} = 9.1\%$

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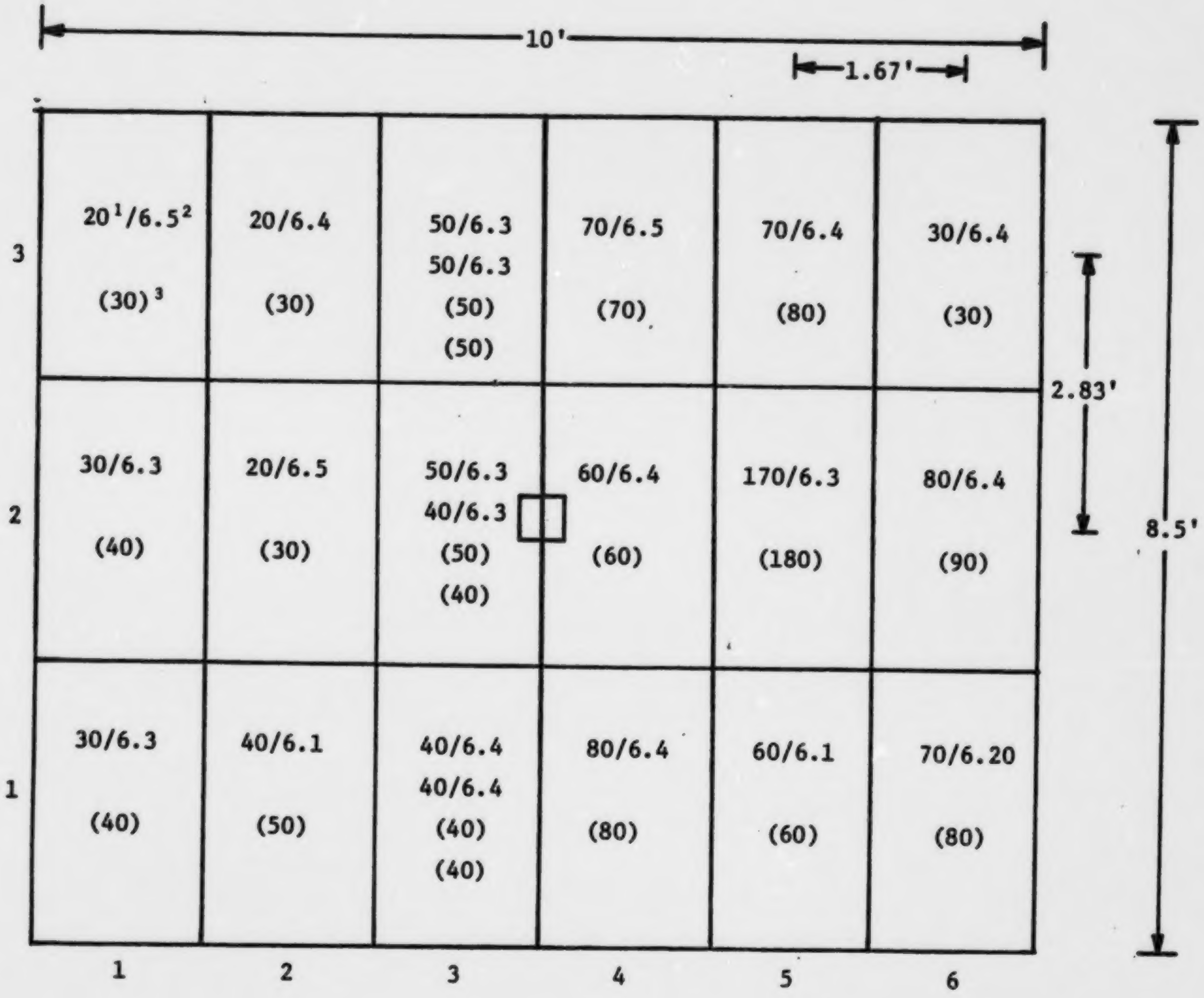
[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-2 Outlet SO_2 Stratification Traverse (8-22-81)



	1	2	3	4	5	6
3	20[1]/6.5[2] (30)[3]	20/6.4 (30)	50/6.3 50/6.3 (50) (50)	70/6.5 (70)	70/6.4 (80)	30/6.4 (30)
2	30/6.3 (40)	20/6.5 (30)	50/6.3 40/6.3 (50) (40)	60/6.4 (60)	170/6.3 (180)	80/6.4 (90)
1	30/6.3 (40)	40/6.1 (50)	40/6.4 40/6.4 (40) (40)	80/6.4 (80)	60/6.1 (60)	70/6.20 (80)

Centroid Measurements	40/6.34 50	40/6.30 50	50/6.27 60	60/6.33 70	60/6.51 70	50/6.42 60	50/6.36 60

Centroid Average = 60

Traverse Average = 60

Deviation = $\frac{60-60}{60}$ = 0%

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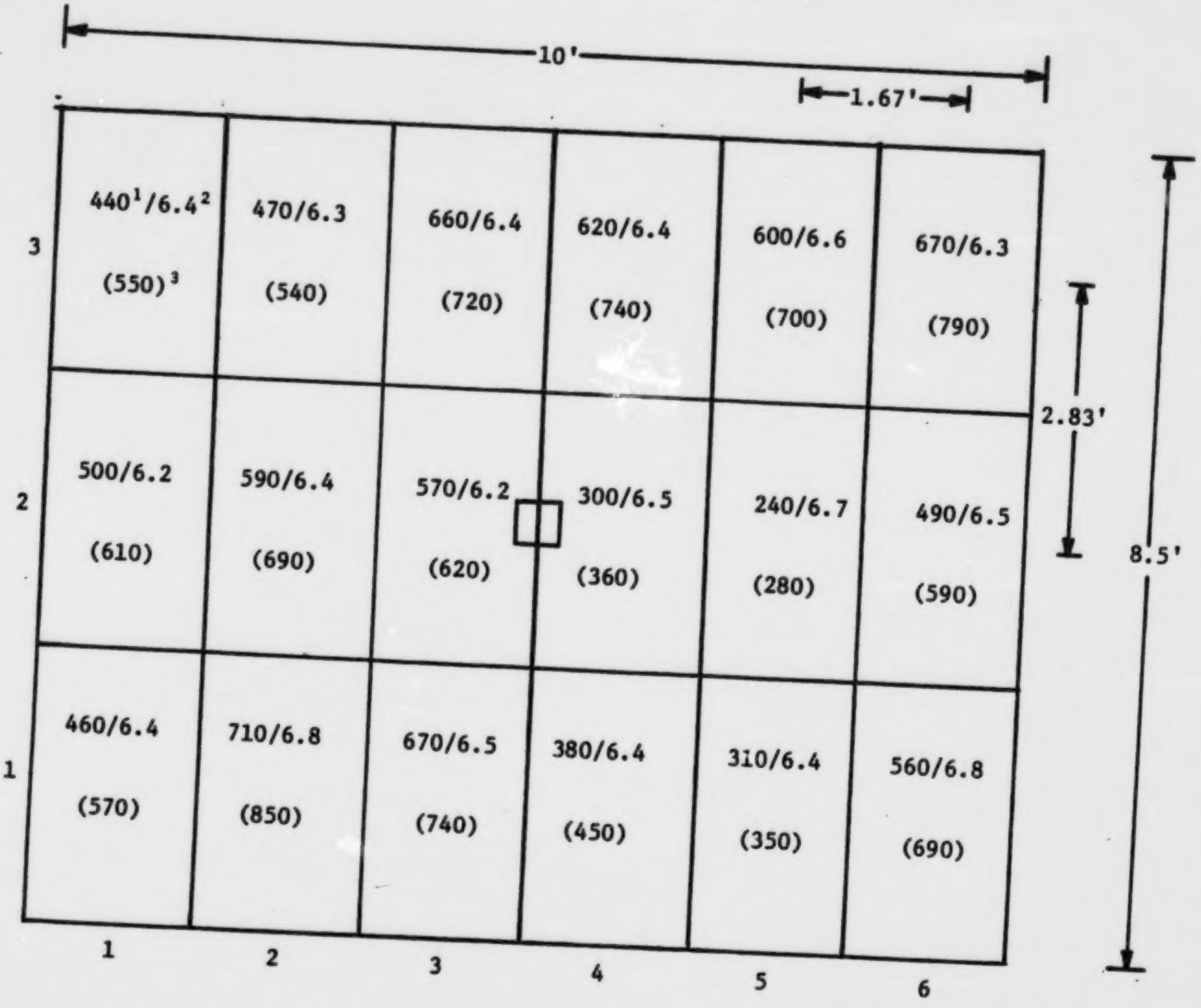
[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

S-1 Outlet SO_2 Stratification Traverse (9-23-81)



	1	2	3	4	5	6
3	440[1]/6.4[2] (550)[3]	470/6.3 (540)	660/6.4 (720)	620/6.4 (740)	600/6.6 (700)	670/6.3 (790)
2	500/6.2 (610)	590/6.4 (690)	570/6.2 (620)	300/6.5 (360)	240/6.7 (280)	490/6.5 (590)
1	460/6.4 (570)	710/6.8 (850)	670/6.5 (740)	380/6.4 (450)	310/6.4 (350)	560/6.8 (690)

Centroid Measurements	440/6.0 500	350/6.7 420	480/6.4 560	400/6.8 480	410/6.6 480	430/6.8 520	370/6.7 440

Centroid Average = 490

Traverse Average = 600

Deviation $= \frac{490-600}{600} = -18.3\%$

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[1] SO_2 as measured (ppm)
[2] O_2 as measured (%)
[3] SO_2 corrected to 4% O_2 and corrected for changes in SO_2 concentration through the run (centroid measurements used as reference)

APPENDIX D

CONTINUOUS MONITORING DATA

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                          JAN 10, 1981

                E(IN)   NO. E(OUT) NO. REDUC. NO.
      HOUR      LB.SO2 OF  LB.SO2 OF    EFF.  OF
                /MMBTU PTS /MMBTU PTS    %    PTS

        0  Data acquisition system down
        1
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12       10.7    4   4.35   4    59.1    4
       13       10.6    4   4.19   4    60.5    4
       14       10.5    2   3.96   2    62.4    2
       15  Data acquisition system down
       16
       17
       18
       19
       20
       21
       22
       23


    AVERAGE
    FOR THE     10.6    3   4.17   3    60.7   3 HOURS OF MONITORING DATA
      DAY


    ROLLING
     30 DAY
    AVERAGE    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     JAN 11, 1981

          E(IN)   NO. E(OUT)  NO. REDUC. NO.
   HOUR   LB.SO2  OF  LB.SO2  OF   EFF.  OF
          /MMBTU  PTS /MMBTU  PTS   %    PTS

     0             0           0          0
     1             0           0          0
     2             0           0          0
     3             0           0          0
     4             0           0          0
     5             0           0          0
     6             0           0          0
     7             0           0          0
     8             0           0          0
     9             0           0          0
    10             0           0          0
    11             0           0          0
    12             0           0          0
    13             0           0          0
    14             0           0          0
    15             0           0          0
    16             0           0          0
    17             0           0          0
    18             0           0          0
    19             0           0          0
    20             0           0          0
    21             0           0          0
    22             0           0          0
    23             0           0          0

 AVERAGE
 FOR THE           0           0          0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

Unit up - Data acquisition system down

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JAN 12, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0   Data acquisition system down
    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12       6.66    4     3.69    4    44.6    4
   13
   14       6.20    4     3.43    4    44.7    4
   15       6.17    2     3.66    2    40.6    2
   16       6.19    3     3.92    3    36.7    3
   17       6.23    4     4.12    4    33.9    4
   18       6.20    2     4.09    2    34.0    2
   19       6.23    3     4.25    3    31.8    3
   20       6.20    4     4.18    4    32.6    4
   21       6.16    4     3.92    4    36.3    4
   22       6.16    4     3.82    4    37.9    4
   23       6.21    4     3.92    4    36.8    4

 AVERAGE
 FOR THE    6.24   11     3.91   11    37.3   11 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 13, 1981

S-1 Down @ 1815
Up @ 1913
Elect. problems

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.27	4	3.96	4	36.8	4
1	6.23	4	3.97	4	36.3	4
2	6.20	4	4.04	4	34.8	4
3	6.20	4	4.05	4	34.7	4
4	6.19	4	3.98	4	35.7	4
5	6.19	4	3.97	4	35.8	4
6	6.15	4	3.97	4	35.4	4
7	6.13	4	4.04	4	34.2	4
8	6.14	3	4.34	3	29.3	3
9	6.09	4	4.10	4	32.7	4
10	6.12	4	3.95	4	35.4	4
11	6.14	2	3.78	2	38.5	2
12	5.94	1	3.63	1	38.9	1
13	6.04	3	3.59	3	40.5	3
14	Data acquisition system down					
15						
16						
17						
18						
19	5.93	1	4.05	1	31.6	1
20	5.96	4	4.34	4	27.2	4
21						
22	6.00	2	4.02	2	33.0	2
23						
AVERAGE FOR THE DAY	6.11	17	3.99	17	34.7	15 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JAN 14, 1981

           E(IN)   NO. E(OUT) NO. REDUC. NO.          S-1 up all day
   HOUR    LB.SO2  OF  LB.SO2 OF   EFF.  OF
           /MMBTU  PTS /MMBTU PTS   %    PTS

      0  Data acquisition system down
      1
      2
      3
      4    6.19     3   4.00   3   35.3   3
      5  Data acquisition system down
      6
      7
      8
      9
     10
     11
     12
     13
     14
     15
     16
     17
     18
     19
     20
     21
     22
     23


 AVERAGE
 FOR THE    6.19    1   4.00   1   35.3   1 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 15, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0	0.25	1		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0	0.25	1		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

Data acquisition system down

↓

S-1 down @ 0340

Recycle nozzles plugged
spheres melted by high temp
Blown expansion joint
Broken supernatant line

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JAN 16, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0            0            0      S-1 down for maintenance
    1              0            0            0
    2              0            0            0
    3              0            0            0
    4              0            0            0
    5              0            0            0
    6              0            0            0
    7              0            0            0
    8              0            0            0
    9              0            0            0
   10              0            0            0
   11              0            0            0
   12              0            0            0
   13              0            0            0
   14              0            0            0
   15              0            0            0
   16              0            0            0
   17              0            0            0
   18              0            0            0
   19              0            0            0
   20              0            0            0
   21              0            0            0
   22              0            0            0
   23              0            0            0

 AVERAGE
 FOR THE           0            0           0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0	0 HOURS OF MONITORING DATA	

Down for maintenance

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 18, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0	0 HOURS OF MONITORING DATA	

Down for maintenance

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                        JAN 19, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0            0            0
     1               0            0            0     Down for maintenance
     2               0            0            0
     3               0            0            0
     4               0            0            0
     5               0            0            0
     6               0            0            0
     7               0            0            0
     8               0            0            0
     9               0            0            0
    10               0            0            0
    11               0            0            0
    12               0            0            0
    13               0            0            0
    14               0            0            0
    15               0            0            0
    16               0            0            0
    17               0            0            0
    18               0            0            0
    19               0            0            0
    20               0            0            0
    21               0            0            0
    22               0            0            0
    23               0            0            0

  AVERAGE
  FOR THE            0            0         0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY
  AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 20, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6	6.99	4		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY	6.99	1		0		0 HOURS OF MONITORING DATA

Down for maintenance

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JAN 21, 1981

         HOUR      E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
                   LB.SO2  OF   LB.SO2  OF    EFF.   OF
                   /MMBTU  PTS  /MMBTU  PTS    %     PTS

           0                0            0            0
           1                0            0            0
           2                0            0            0
           3                0            0            0
           4                0            0            0
           5                0            0            0
           6                0            0            0
           7                0            0            0
           8                0            0            0
           9                0            0            0
          10                0            0            0
          11                0            0            0
          12                0            0            0
          13                0            0            0
          14                0            0            0
          15                0            0            0
          16                0            0            0
          17                0            0            0
          18                0            0            0
          19                0            0            0
          20                0            0            0
          21                0            0            0
          22                0            0            0
          23                0            0            0

       AVERAGE
       FOR THE              0            0          0 HOURS OF MONITORING DATA
         DAY

       ROLLING
        30 DAY
       AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

Down for maintenance

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JAN 22, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0               0            0            0      Down for maintenance
    1               0            0            0
    2               0            0            0
    3               0            0            0
    4               0            0            0
    5               0            0            0
    6               0            0            0
    7               0            0            0
    8               0            0            0
    9               0            0            0
   10               0            0            0
   11               0            0            0
   12               0            0            0
   13               0            0            0
   14               0            0            0
   15               0            0            0
   16               0            0            0
   17               0            0            0
   18               0            0            0
   19               0            0            0
   20               0            0            0
   21               0            0            0
   22               0            0            0
   23               0            0            0

 AVERAGE
 FOR THE            0            0           0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

```
              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-1

                     JAN 23, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0              0            0            0
     1              0            0            0
     2              0            0            0
     3              0            0            0
     4              0            0            0
     5              0            0            0
     6              0            0            0
     7              0            0            0
     8              0            0            0
     9              0            0            0
    10              0            0            0
    11              0            0            0
    12              0            0            0
    13              0            0            0
    14              0            0            0
    15              0            0            0
    16              0            0            0
    17              0            0            0
    18              0            0            0
    19              0            0            0
    20              0            0            0
    21              0            0            0
    22              0            0            0
    23              0            0            0

  AVERAGE
  FOR THE           0            0        0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY
  AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

Down for maintenance

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1						
2						
3	7.30	5	2.96	5	59.5	5
4	7.28	5	2.97	5	59.3	5
5	7.29	5	2.78	5	61.9	5
6	7.33	5	2.76	5	62.3	5
7	7.38	5	2.68	5	63.6	5
8	7.35	5	2.70	5	63.2	5
9	7.35	4	2.60	4	64.6	4
10	Down for maintenance					
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	7.33	7	2.78	7	62.1	7 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA

Down for maintenance

ROLLING 30 DAY AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JAN 26, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0                                                Unit up @ 1250
    1                                                Down @ 2400
    2                                                due to low load
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13      6.46     5    1.83    5    71.7    5
   14      6.46     3    2.08    3    67.8    3
   15
   16      6.51     2    2.33    2    64.3    2
   17      6.56     4    2.38    4    63.7    4
   18    Data acquisition system down
   19                |
   20                v
   21      6.62     5    2.72    5    58.8    5
   22      6.61     5    2.78    5    58.0    5
   23      6.62     3    2.54    3    61.5    3

 AVERAGE
 FOR THE   6.55     7    2.38    7    63.7    7 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 27, 1981

S-1 up @ 0600

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6	6.80	5	2.32	5	66.1	5
7	6.93	5	2.80	5	59.6	5
8	6.94	4	3.07	4	55.7	4
9	6.92	5	3.38	5	51.2	5
10	6.85	4	3.32	4	51.6	4
11	6.77	2	3.42	2	49.6	2
12	Data acquisition system down					
13						
14						
15	6.75	4	3.80	4	43.7	4
16	6.76	2	3.84	2	43.2	2
17						
18	6.92	5	4.13	5	40.3	5
19						
20						
21	7.03	4	4.00	4	43.1	4
22	7.13	5	3.86	5	45.9	5
23	7.10	5	3.70	5	47.8	5

AVERAGE FOR THE DAY	6.91	12	3.47	12	49.8	12 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE — NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.58	5	3.82	5	49.9	5
1	7.25	5	3.38	5	53.3	5
2	7.18	5	3.58	5	50.2	5
3	7.17	4	3.66	5	48.9	4
4	7.19	5	3.70	3	48.5	3
5	7.18	5	3.81	5	46.9	5
6	7.16	5	3.95	5	44.7	5
7	7.04	5	3.98	5	43.4	5
8	7.00	5	4.35	5	37.8	5
9	6.97	3	4.62	3	33.7	3
10						
11	7.10	1	4.21	1	40.8	1
12	7.00	5	4.26	5	39.2	5
13	Data acquisition system down					
14						
15						
16						
17		↓				
18	6.85	1	3.90	1	43.0	1
19	7.01	5	3.84	5	45.2	5
20	6.97	5	3.56	5	48.9	5
21	6.98	4	3.39	4	51.4	4
22	Diskette errors no report					
23	6.94	1	3.29	1	52.6	1
AVERAGE FOR THE DAY	7.09	17	3.84	17	45.9	14 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JAN 29, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0        6.64    2     4.15   2     37.4    2
    1        6.67    4     4.17   4     37.5    4
    2        6.60    5     3.66   5     44.6    5
    3
    4        6.66    5     3.64   5     45.3    5
    5        6.67    5     3.81   5     42.9    5
    6        6.59    5     3.71   5     43.7    5
    7        6.62    5     3.75   5     43.4    5
    8        6.71    5     3.51   5     47.7    5
    9        6.77    5     3.76   5     44.6    5
   10        6.77    1     3.64   1     46.3    1
   11        6.75    1     3.45   1     48.9    1
   12
   13        6.47    4     3.95   4     39.0    4
   14        6.55    4     9.11   5     42.7    4
   15        6.60    2     3.45   2     47.8    2
   16
   17        6.71    1     3.31   1     50.7    1
   18    Data acquisition system down
   19    Data acquisition system down
   20        6.58    2     3.63   2     44.8    2
   21        6.64    5     3.59   5     45.8    5
   22        6.61    5     3.67   5     44.5    5
   23        6.72    5     3.67   5     45.4    5


AVERAGE
FOR THE      6.65   19     3.98  19     43.6  16 HOURS OF MONITORING DATA
 DAY


ROLLING
 30 DAY    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JAN 30, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS     %     PTS

       0       6.70    5     3.60    5    46.2    5
       1       6.73    5     3.62    5    46.3    5
       2       6.77    5     3.64    5    46.2    5
       3       6.67    5     9.48    5     -42    5
       4       6.66    5     3.75    5    43.7    5
       5       6.71    5     3.97    5    40.8    5
       6       6.71    5     4.21    5    37.2    5
       7       6.76    5     4.42    5    34.6    5
       8       6.78    4     4.14    5    39.0    4
       9       6.76    5     4.01    5    40.7    5
      10       6.80    5     4.14    5    39.1    5
      11       6.91    1     4.30    1    37.8    1
      12       6.54    2     3.39    2    48.2    2
      13       6.51    4     3.14    4    51.8    4
      14    Certification testing
      15       6.46    3     2.91    3    55.0    3
      16       6.44    5     3.05    5    52.6    5
      17       6.45    2     3.21    2    50.3    2
      18       6.47    5     2.99    5    53.7    5
      19       6.49    3     3.04    3    53.1    3
      20       6.51    5     2.98    5    54.1    5
      21       6.47    2     2.92    2    54.9    2
      22       6.50    4     3.11    4    52.2    4
      23       6.59    3     3.04    3    53.8    3


    AVERAGE
    FOR THE    6.63   23     3.79   23    43.2   22 HOURS OF MONITORING DATA
      DAY


    ROLLING
     30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
    AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JAN 31, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.53	2	2.50	2	61.7	2
1	6.50	4	2.47	4	62.0	4
2	6.62	2	2.76	2	58.3	2
3	6.61	5	2.65	5	60.0	5
4	6.50	5	2.69	5	58.5	5
5	6.31	2	2.85	2	54.9	2
6	6.57	4	2.80	4	57.5	4
7	6.54	3	2.74	3	58.0	3
8	6.47	3	2.75	3	57.5	3
9						
10	6.43	4	2.99	4	53.6	4
11	6.44	4	8.13	5	51.6	4
12	6.41	3	3.13	3	51.1	3
13	Zeroing & spanning - Report made - Daily zero and span					
14	6.33	3	3.16	3	50.1	3
15	6.43	5	3.15	5	51.1	5
16	6.51	4	3.22	4	50.6	4
17	6.47	5	3.27	5	49.4	5
18	6.41	3	3.23	3	49.6	3
19	6.39	5	3.22	5	49.6	5
20	6.49	5	3.19	5	50.8	5
21	6.47	5	3.18	5	50.8	5
22	6.58	5	3.09	5	53.0	5
23	6.59	5	3.16	6	52.0	5
AVERAGE FOR THE DAY	6.48	22	3.20	22	54.2	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 1, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.57	2	3.33	2	49.3	2
1						
2	6.56	5	3.25	5	50.5	5
3	6.61	5	3.09	5	53.2	5
4	6.59	5	3.02	5	54.1	5
5	6.62	5	3.08	5	53.5	5
6	6.60	5	3.08	5	53.3	5
7	6.65	4	3.14	4	52.8	4
8	6.66	4	3.29	4	50.7	4
9	6.62	5	3.24	5	51.1	5
10	Data acquisition system down					
11		↓				
12						
13	6.45	2	3.24	2	49.8	2
14	6.55	3	3.30	3	49.7	3
15	6.61	4	3.49	5	46.9	4
16	6.57	3	3.48	3	47.1	3
17	Certification testing					
18	Certification testing					
19	6.82	5	3.58	5	47.6	5
20	6.81	3	3.54	3	48.1	3
21	6.80	5	3.32	5	51.2	5
22	6.93	4	3.20	5	53.4	4
23	6.96	2	3.35	2	51.8	2
AVERAGE FOR THE DAY	6.67	18	3.28	18	50.8	18 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.09	4	3.37	4	52.5	4
1	7.11	1	3.27	1	54.0	1
2	7.13	5	3.52	5	50.7	5
3	7.08	5	3.73	5	47.3	5
4	7.08	5	3.62	5	48.9	5
5	7.14	5	3.78	5	47.0	5
6	7.10	5	3.77	5	47.0	5
7	7.08	5	3.71	5	47.5	5
8	7.08	5	3.78	5	46.7	5
9	7.14	5	3.92	5	45.1	5
10	7.14	5	3.60	5	49.6	5
11	7.08	5	3.77	5	46.6	5
12	7.10	5	3.74	5	47.3	5
13	7.22	5	3.82	5	47.2	5
14	7.13	5	3.74	5	47.5	5
15	7.38	5	3.75	5	49.1	5
16	7.32	5	3.90	5	46.7	5
17	7.27	4	3.99	4	45.2	4
18	7.34	1	3.94	1	46.3	1
19	7.03	5	3.85	5	45.2	5
20	7.06	5	3.88	5	45.1	5
21	7.03	5	3.77	5	46.4	5
22	7.07	5	3.70	5	47.8	5
23	7.02	4	3.69	4	47.5	4
AVERAGE FOR THE DAY	7.13	24	3.73	24	47.4	22 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.14	5	3.49	5	51.1	5
1	7.13	4	3.45	5	51.8	4
2	7.04	5	3.32	5	52.8	5
3	7.13	5	2.86	5	59.9	5
4	7.15	5	2.71	5	62.1	5
5	7.08	5	2.78	5	60.7	5
6	7.03	5	3.23	5	54.0	5
7	7.05	5	3.49	5	50.5	5
8	7.06	5	3.63	5	48.6	5
9	7.05	5	3.76	5	46.6	5
10	7.05	5	3.60	5	48.9	5
11	7.02	4	3.71	4	47.1	4
12	7.01	5	3.78	5	46.1	5
13	6.98	5	3.65	5	47.7	5
14	6.93	4	3.58	4	48.4	4
15	6.94	5	3.53	5	49.1	5
16	7.00	4	3.46	4	50.5	4
17	7.14	5	3.74	5	47.6	5
18	7.06	4	3.82	5	45.6	4
19	7.03	3	3.78	3	46.2	3
20						
21	6.88	5	3.56	5	48.2	5
22	6.81	5	3.59	5	47.2	5
23	6.78	5	3.63	5	46.5	5
AVERAGE FOR THE DAY	7.02	23	3.49	23	50.3	23 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.83	5	4.09	5	40.1	5
1	6.85	5	3.97	5	42.0	5
2	6.86	5	3.71	5	46.0	5
3	6.86	5	3.77	4	45.1	4
4	6.88	5	3.88	5	43.5	5
5	6.89	5	4.27	5	38.1	5
6	6.87	5	4.34	5	36.8	5
7	6.97	5	4.37	5	37.3	5
8	6.97	5	4.45	5	36.2	5
9	6.93	5	4.31	5	37.8	5
10	7.04	5	4.23	5	40.0	5
11	7.08	2	4.49	3	37.3	2
12	6.91	5	4.47	3	35.1	3
13	6.78	5	4.41	5	34.9	5
14	Maintenance on O_2 monitors					
15						
16						
17						
18						
19						
20	6.93	5	3.99	5	42.4	5
21						
22	6.70	2	3.65	2	45.5	2
23	6.71	5	3.61	5	46.1	5
AVERAGE FOR THE DAY	6.89	17	4.12	17	40.2	17 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.80	5	3.64	5	46.4	5
1	6.79	5	3.76	5	44.6	5
2	6.75	5	3.62	5	46.4	5
3	6.81	5	3.55	5	47.9	5
4	6.74	4	3.65	5	45.8	4
5	6.65	5	3.78	5	43.2	5
6	6.76	5	3.80	5	43.8	5
7	6.71	5	3.88	5	42.2	5
8	6.71	4	3.53	4	47.4	4
9	6.79	5	3.93	5	42.1	5
10	Daily span and zero					
11	6.71	4	4.13	4	38.4	4
12	6.66	5	3.96	5	40.6	5
13	6.66	4	4.00	4	39.9	4
14	6.66	5	4.10	5	38.4	5
15	6.61	5	4.07	5	38.4	5
16	6.55	1	3.97	1	39.5	1
17	Span and zero					
18	6.39	5	4.02	5	37.0	5
19	6.27	5	3.86	5	38.3	5
20	6.31	5	3.97	5	37.0	5
21	6.22	3	3.86	3	37.9	3
22	6.10	3	3.60	3	41.0	3
23	6.39	5	3.49	5	45.5	5
AVERAGE FOR THE DAY	6.59	22	3.83	22	42.0	21 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.09	5	3.13	5	48.6	5
1	6.13	5	3.40	5	44.6	5
2	6.05	5	3.66	5	39.5	5
3	5.98	3	3.85	4	39.3	3
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22	6.36	3	3.55	3	44.2	3
23	6.43	5	3.54	5	44.9	5
AVERAGE FOR THE DAY	6.17	6	3.52	6	43.5	6 HOURS OF MONITORING DATA

Down @ 0340
Ruptured seal water line
Up @ 2215

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      FEB 7, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

   0        6.46    5    3.14    5    51.4    5
   1        6.53    5    3.28    5    49.8    5
   2        6.56    5    3.62    5    44.8    5
   3        6.55    5    3.72    5    43.2    5
   4        6.58    5    3.68    5    44.0    5
   5        6.59    5    3.71    5    43.7    5
   6        6.54    5    3.78    5    42.2    5
   7        6.54    5    3.78    5    42.3    5
   8        6.61    5    3.88    5    41.2    5
   9        6.64    5    3.85    5    42.0    5
  10        6.68    1    3.78    1    43.4    1
  11
  12        6.44    5    4.64    3    28.4    3
  13    Recycle pump down
  14    SO2 stratification checked
  15
  16        6.18    1    3.41    1    44.8    1
  17        6.41    5    3.38    5    47.3    5
  18        6.34    4    3.50    4    44.8    4
  19    Data acquisition system down
  20
  21
  22
  23        6.22    4    3.19    4    48.8    4


AVERAGE
FOR THE     6.49   16    3.65   16    43.8   14 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 8, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.26	5	3.21	5	48.7	5
1	6.29	5	3.26	5	48.2	5
2	6.30	4	3.24	4	48.6	4
3	6.30	3	3.52	3	44.1	3
4	6.36	4	3.60	5	44.2	4
5	6.38	5	3.45	5	46.0	5
6	6.36	5	3.63	5	42.8	5
7	6.40	5	3.65	5	43.0	5
8	6.43	5	3.66	5	43.1	5
9	6.42	5	3.70	5	42.4	5
10	6.43	5	3.78	5	41.3	5
11	6.44	4	3.59	4	44.3	4
12	6.49	2	3.84	2	40.8	2
13	6.49	5	4.05	5	37.7	5
14	6.41	3	4.02	2	37.2	2
15	6.65	4	4.06	4	38.9	4
16	6.61	5	3.98	5	39.8	5
17	6.51	1	3.83	1	41.2	1
18	6.91	1	4.15	1	40.0	1
19	6.76	4	4.33	4	35.9	4
20	6.72	5	4.72	3	30.0	3
21	6.68	5	4.94	2	26.4	2
22	6.62	5		0		0
23	6.71	4		0		0
AVERAGE FOR THE DAY	6.50	24	4.05	22	41.2	20 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           FEB 9, 1981

          E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
 HOUR     LB.SO2   OF   LB.SO2   OF    EFF.   OF
          /MMBTU   PTS  /MMBTU   PTS    %     PTS

   0
   1       6.69     3             0            0
   2       6.76     5             0            0
   3       6.71     5    3.89     2    42.0    2
   4       6.65     5    3.83     5    42.4    5
   5       6.64     5    3.92     5    40.9    5
   6       6.71     5    4.08     5    39.1    5
   7       6.67     5    4.17     5    37.6    5
   8       6.69     5    4.12     5    38.4    5
   9       6.69     5    3.92     5    41.3    5
  10       6.51     5    3.97     5    39.0    5
  11       6.60     5    4.02     5    39.1    5
  12       6.55     5    4.05     5    38.2    5
  13       6.47     5    4.05     5    37.4    5
  14       6.51     5    4.20     5    35.5    5
  15       6.56     5    4.27     5    34.9    5
  16    Daily zero and span
  17       6.76     3    4.90     3    27.5    3
  18       6.72     5    5.37     5    20.1    5
  19       6.71     5    5.35     4    20.2    4
  20       6.64     5    4.44     5    33.2    5
  21       6.64     5    4.29     5    35.3    5
  22       6.61     5    4.26     5    35.5    5
  23       6.68     5    4.10     5    38.7    5

 AVERAGE
 FOR THE   6.64    22    4.26    20    35.8   20 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.72   312    3.70   308    44.9    8 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.71	5	4.04	5	39.9	5
1	6.68	2	3.84	2	42.5	2
2						
3	6.64	5	4.04	5	39.1	5
4	6.66	5	4.04	5	39.3	5
5	6.58	5	4.00	5	39.1	5
6	6.61	5	3.89	5	41.2	5
7	6.65	5	3.83	5	42.5	5
8	6.56	5	4.35	5	33.2	5
9	Data acquisition system down					
10						
11						
12	6.88	3	4.64	3	32.6	3
13	6.91	5	4.78	5	30.8	5
14	6.93	5	4.66	5	32.8	5
15	6.89	5	4.52	5	34.3	5
16	6.99	5	4.18	5	40.2	5
17	7.03	5	3.88	5	44.8	5
18						
19	7.24	5	3.80	5	47.5	5
20	7.19	5	3.63	5	49.5	5
21	7.16	5	3.13	5	56.4	5
22	7.28	5	3.07	5	57.9	5
23	7.30	5	2.98	5	59.1	5
AVERAGE FOR THE DAY	6.89	19	3.96	19	42.2	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.70	328	3.71	324	44.5	9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.18	5	2.94	5	59.1	5
1	7.26	5	2.76	5	62.0	5
2	7.24	5	2.96	5	59.1	5
3	7.33	5	3.35	5	54.3	5
4	7.30	5	3.82	5	47.7	5
5	7.22	5	4.29	5	40.6	5
6	7.26	5	5.33	5	26.5	5
7	7.18	5	6.12	5	14.7	5
8	7.24	1	6.36	1	12.2	1
9	Unit down @ 0815 - Frozen slurry makeup lines					
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	7.25	9	4.21	9	45.5	8 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.71	337	3.73	333	44.5	9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.73	326	3.72	322	44.7	9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Unit down for maintenance
due to freezing weather

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           FEB 13, 1981

           E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0             0            0            0
     1             0            0            0
     2             0            0            0
     3             0            0            0
     4             0            0            0
     5             0            0            0
     6             0            0            0
     7             0            0            0
     8             0            0            0
     9             0            0            0
    10             0            0            0
    11             0            0            0
    12             0            0            0
    13             0            0            0
    14             0            0            0
    15             0            0            0
    16             0            0            0
    17             0            0            0
    18             0            0            0
    19             0            0            0
    20             0            0            0
    21             0            0            0
    22             0            0            0
    23             0            0            0

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.76   309   3.71   305   45.2    9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

Unit down for maintenance
due to freezing weather

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                        FEB 14, 1981

             E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0            0             0
     1               0            0             0
     2               0            0             0
     3               0            0             0
     4               0            0             0
     5               0            0             0
     6               0            0             0
     7               0            0             0
     8               0            0             0
     9               0            0             0
    10               0            0             0
    11               0            0             0
    12               0            0             0
    13               0            0             0
    14               0            0             0
    15               0            0             0
    16               0            0             0
    17               0            0             0
    18               0            0             0
    19               0            0             0
    20               0            0             0
    21               0            0             0
    22               0            0             0
    23               0            0             0

  AVERAGE
  FOR THE            0            0             0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   6.76    308  3.71    304  45.2      9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Unit down for maintenance
due to freezing weather

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      FEB 15, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0            0            0
    1              0            0            0
    2              0            0            0
    3              0            0            0
    4              0            0            0
    5              0            0            0
    6              0            0            0
    7              0            0            0
    8              0            0            0
    9              0            0            0
   10              0            0            0
   11              0            0            0
   12              0            0            0
   13              0            0            0
   14              0            0            0
   15              0            0            0
   16              0            0            0
   17              0            0            0
   18              0            0            0
   19              0            0            0
   20              0            0            0
   21              0            0            0
   22              0            0            0
   23              0            0            0

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
  DAY

 ROLLING
  30 DAY  6.76   308   3.72   303   45.0   9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

Unit down for maintenance
due to freezing weather

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           FEB 16, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0            0             0
     1               0            0             0
     2               0            0             0
     3               0            0             0
     4               0            0             0
     5               0            0             0
     6               0            0             0
     7               0            0             0
     8               0            0             0
     9               0            0             0
    10               0            0             0
    11               0            0             0
    12               0            0             0
    13               0            0             0
    14               0            0             0
    15               0            0             0
    16               0            0             0
    17               0            0             0
    18               0            0             0
    19               0            0             0
    20               0            0             0
    21               0            0             0
    22               0            0             0
    23               0            0             0

  AVERAGE
  FOR THE            0            0        0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   6.76   308   3.72    303   45.0    9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Unit down for maintenance
due to freezing weather

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.76	308	3.72	303	45.0	9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Unit down for maintenance due to freezing weather

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       FEB 18, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0               0             0            0
     1               0             0            0
     2               0             0            0
     3               0             0            0
     4               0             0            0
     5               0             0            0
     6               0             0            0
     7               0             0            0
     8               0             0            0
     9               0             0            0
    10               0             0            0
    11               0             0            0
    12               0             0            0
    13               0             0            0
    14               0             0            0
    15               0             0            0
    16               0             0            0
    17               0             0            0
    18               0             0            0
    19               0             0            0
    20               0             0            0
    21               0             0            0
    22               0             0            0
    23               0             0            0

 AVERAGE
 FOR THE             0             0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.76    308   3.72    303   45.0    9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

Unit down for maintenance
due to freezing weather

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 19, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0		0		0		0	Unit down for maintenance due to freezing weather
1		0		0		0	
2		0		0		0	
3		0		0		0	
4		0		0		0	
5		0		0		0	
6		0		0		0	
7		0		0		0	
8		0		0		0	
9		0		0		0	
10		0		0		0	
11		0		0		0	
12		0		0		0	
13		0		0		0	
14		0		0		0	
15		0		0		0	
16		0		0		0	
17		0		0		0	
18		0		0		0	
19		0		0		0	
20		0		0		0	
21		0		0		0	
22		0		0		0	
23		0		0		0	
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA	

ROLLING 30 DAY AVERAGE NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 20, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA

Unit down for maintenance due to freezing weather

ROLLING 30 DAY AVERAGE NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       FEB 21, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0               0            0            0
   1               0            0            0
   2               0            0            0
   3               0            0            0
   4               0            0            0
   5               0            0            0
   6               0            0            0
   7               0            0            0
   8               0            0            0
   9               0            0            0
  10               0            0            0
  11               0            0            0
  12               0            0            0
  13               0            0            0
  14               0            0            0
  15               0            0            0
  16               0            0            0
  17               0            0            0
  18               0            0            0
  19               0            0            0
  20               0            0            0
  21               0            0            0
  22               0            0            0
  23               0            0            0


AVERAGE
FOR THE            0            0            0 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   6.76   307   3.72   303   45.0     9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

Unit down for maintenance
due to freezing weather

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      FEB 22, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0             0           0
     1               0             0           0
     2               0             0           0
     3               0             0           0
     4               0             0           0
     5               0             0           0
     6               0             0           0
     7               0             0           0
     8               0             0           0
     9               0             0           0
    10               0             0           0
    11               0             0           0
    12               0             0           0
    13               0             0           0
    14               0             0           0
    15               0             0           0
    16               0             0           0
    17               0             0           0
    18               0             0           0
    19               0             0           0
    20               0             0           0
    21               0             0           0
    22               0             0           0
    23               0             0           0

  AVERAGE
  FOR THE            0             0           0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   6.76    307   3.72    303   45.0   9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Unit down for maintenance
due to freezing weather

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      FEB 23, 1981

               E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
        HOUR   LB.SO2 OF   LB.SO2  OF    EFF.   OF
               /MMBTU PTS  /MMBTU  PTS    %     PTS

          0
          1
          2
          3
          4
          5
          6
          7
          8
          9
         10
         11
         12
         13
         14
         15     6.74   1    0.58    1    91.4    1        Unit up @ 1545
         16     6.68   5    0.88    4    86.8    4
         17     6.69   5    0.93    5    86.1    5
         18     6.72   5    0.78    5    88.3    5
         19     6.77   5    0.84    5    87.5    5
         20     6.80   5    0.92    5    86.5    5
         21     6.85   5    0.86    5    87.5    5
         22     7.00   5    0.97    5    86.3    5
         23     6.81   4    0.98    5    85.6    4

      AVERAGE
      FOR THE   6.79   9    0.86    9    86.8   8 HOURS OF MONITORING DATA
        DAY

      ROLLING
       30 DAY   6.76  316   3.63   312   46.3   9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
      AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.77	5	1.12	5	83.4	5
1	6.77	5	1.16	5	82.9	5
2	6.81	5	1.31	5	80.8	5
3	6.82	5	1.52	5	77.7	5
4	6.84	5	1.49	5	78.2	5
5	6.83	4	1.41	4	79.3	4
6	6.87	5	1.46	5	78.7	5
7	6.91	5	1.38	5	80.1	5
8	6.94	4	1.40	4	79.9	4
9	6.89	4	1.30	4	81.2	4
10	6.92	5	1.21	5	82.5	5
11	6.91	2	1.18	2	82.9	2
12	6.95	1		0		0
13						
14	Certification testing					
15	(Response time tests)					
16	6.87	3	1.03	3	85.0	3
17	6.77	1	0.95	1	85.9	1
18	6.81	1	0.81	1	88.0	1
19	6.86	5	1.06	5	84.5	5
20	6.85	5	1.07	5	84.3	5
21	6.85	5	1.04	5	84.8	5
22	6.81	5	1.04	5	84.7	5
23	6.81	5	1.04	5	84.8	5
AVERAGE FOR THE DAY	6.85	21	1.20	20	82.0	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.77	337	3.49	332	48.5	10 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 25, 1981

```
         E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2   OF    EFF.   OF
         /MMBTU   PTS  /MMBTU   PTS    %     PTS

   0      6.86    5     1.12    5     83.7   5
   1      6.85    5     1.09    5     84.0   5
   2      6.86    5     1.12    5     83.7   5
   3      6.80    5     1.14    5     83.3   5
   4      6.87    5     1.14    5     83.4   5
   5      6.86    4     1.13    4     83.6   4
   6      6.79    5     1.05    5     84.6   5
   7      6.90    5     1.11    5     84.0   5
   8      6.91    3     1.18    3     82.9   3
   9   Unit down 0835-1025 - Power outage
  10                  ↓
  11
  12      7.09    3     1.45    3     79.6   3
  13      7.04    5     1.49    5     78.8   5
  14      7.06    5     1.61    5     77.2   5
  15   Certification testing - Running response time test
  16                  ↓
  17
  18      7.03    4     1.54    6     77.4   4
  19              0     1.52    5            0
  20      7.20    4     1.51    5     79.2   4
  21      7.15    5     1.45    5     79.7   5
  22      7.13    5     1.35    5     81.1   5
  23      7.15    5     1.14    5     84.1   5

AVERAGE
FOR THE   6.97   17     1.29   18     81.8  17 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   6.77  347     3.39  343     50.0  10 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 26, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.21	5	1.00	5	86.1	5
1	7.26	5	0.86	5	88.1	5
2	7.28	5	0.87	5	88.0	5
3	7.33	5	0.91	5	87.5	5
4	7.40	4	0.83	5	88.8	4
5	7.29	5	0.82	5	88.8	5
6	7.36	5	0.90	5	87.8	5
7	7.40	5	0.90	5	87.8	5
8	7.38	5	0.92	5	87.6	5
9	7.40	5	0.99	5	86.7	5
10	7.44	5	0.98	5	86.8	5
11	7.38	5	1.18	5	84.0	5
12	7.38	5	1.25	5	83.0	5
13	7.38	2	0.98	2	86.7	2
14	Certification Testing - O_2 Drift Test					
15	7.16	4	1.07	4	85.0	4
16	7.05	5	0.95	5	86.5	5
17	7.03	5	1.11	5	84.2	5
18	7.01	5	1.23	5	82.5	5
19	7.09	5	1.27	5	82.1	5
20	7.13	5	1.35	5	81.1	5
21	7.09	5	1.36	5	80.8	5
22	7.13	5	1.43	5	80.0	5
23	7.13	5	1.64	5	77.0	5
AVERAGE FOR THE DAY	7.25	23	1.08	23	85.1	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.80	370	3.24	366	52.3	11 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                        FEB 27, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0       7.09    5     1.52    5    78.5    5
     1       7.14    5     1.42    5    80.2    5
     2       7.13    5     1.51    5    78.9    5
     3       7.09    5     1.54    5    78.3    5
     4       7.07    5     1.53    5    78.4    5
     5       7.01    5     1.47    5    79.0    5
     6       7.04    5     1.54    5    78.2    5
     7       6.90    5     1.52    5    78.0    5
     8       6.95    5     2.03    5    70.7    5
     9       6.89    5     2.04    5    70.3    5
    10       6.84    5     1.99    5    70.9    5
    11       6.84    5     1.89    5    72.3    5
    12       6.77    5     1.96    5    71.1    5
    13       6.71    5     1.87    5    72.1    5
    14       6.73    5     1.96    5    70.9    5
    15       6.72    3     1.96    3    70.9    3
    16       6.93    4     1.31    4    81.1    4
    17       6.93    5     1.16    5    83.2    5
    18       6.88    5     1.21    5    82.4    5
    19       6.87    5     1.25    5    81.8    5
    20       6.82    5     1.15    5    83.1    5
    21       6.81    5     1.18    5    82.7    5
    22       6.80    4     1.13    4    83.4    4
    23       7.34    5     1.04    5    85.9    5


 AVERAGE
 FOR THE     6.93   24     1.55   24    77.6   24 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY     6.81  387     3.15  383    53.7   12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

FEB 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.00	5	0.94	5	86.5	5
1	7.09	5	0.98	5	86.1	5
2	7.22	5	1.02	5	85.9	5
3	7.26	5	1.06	5	85.4	5
4	7.25	4		0		0
5	7.33	5	1.40	5	81.0	5
6	7.27	5	1.43	5	80.3	5
7	7.24	5	1.42	5	80.3	5
8	7.28	5	1.49	5	79.5	5
9	7.21	5	1.22	5	83.0	5
10	7.23	4	1.19	4	83.5	4
11	7.24	5	1.17	5	83.8	5
12	7.15	4	1.14	4	84.0	4
13	7.17	5	1.17	5	83.7	5
14	Data acquisition system down					
15	Data acquisition system down					
16	7.34	2	1.03	2	85.9	2
17						
18	7.17	4	1.34	4	81.4	4
19	7.10	5	1.15	4	83.8	4
20	7.14	5	0.80	5	88.8	5
21	7.10	5	0.70	5	90.2	5
22	7.10	5	0.70	5	90.2	5
23						
AVERAGE FOR THE DAY	7.20	20	1.12	19	84.4	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.83	395	3.04	390	55.4	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       MAR 1, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0       7.13    3    1.10    3    84.5    3
     1       7.14    5    0.89    5    87.5    5
     2       7.14    5    0.95    5    86.7    5
     3       7.08    1    1.03    1    85.5    1
     4       7.17    5    0.94    5    86.9    5
     5       7.16    5    0.82    5    88.5    5
     6       7.09    5    0.83    5    88.4    5
     7       7.11    5    0.79    5    88.8    5
     8       7.10    5    0.76    5    89.3    5
     9       7.14    5    0.79    5    88.9    5
    10       7.11    5    0.76    5    89.2    5
    11       7.16    5    0.79    5    88.9    5
    12       7.42    5    0.70    5    90.6    5
    13       6.96    5    0.61    5    91.3    5
    14       7.00    5    0.61    5    91.2    5
    15   Data acquisition system down
    16   Data acquisition system down
    17       6.91    5    0.64    5    90.7    5
    18
    19       6.90    2    0.74    2    89.3    2
    20       6.85    5    0.62    5    90.9    5
    21       6.86    4    0.58    4    91.6    4
    22       6.93    5    0.57    5    91.7    5
    23       6.95    5    0.61    5    91.2    5

  AVERAGE
  FOR THE    7.06   21    0.77   21    89.3  20 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.83  399    2.89  394    57.7  14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.01	5	0.59	5	91.6	5
1	6.96	5	0.58	5	91.6	5
2	Unit down @ 0200 - Sludge thickener problems					
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	6.98	2	0.58	2	91.6	2 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.84	382	2.82	377	58.8	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       MAR 3, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0            0            0
    1              0            0            0
    2              0            0            0
    3              0            0            0
    4              0            0            0
    5              0            0            0
    6              0            0            0
    7              0            0            0
    8              0            0            0
    9              0            0            0
   10              0            0            0
   11              0            0            0
   12              0            0            0
   13              0            0            0
   14              0            0            0
   15              0            0            0
   16              0            0            0
   17              0            0            0
   18              0            0            0
   19              0            0            0
   20              0            0            0
   21              0            0            0
   22              0            0            0
   23              0            0            0

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  6.85    359  2.76    354   59.8   13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

Unit down for maintenance
Sludge thickener problems

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Unit down for maintenance - Sludge thickener problems					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14	6.85	4	1.72	4	74.9	4
15	6.58	5	1.65	5	74.9	5
16	6.59	5	1.63	5	75.2	5
17	6.61	5	1.25	5	81.1	5
18	6.82	2	1.13	2	83.4	2
19	6.93	5	1.15	5	83.4	5
20	6.89	4	1.28	5	81.8	4
21	6.97	5	1.02	5	85.3	5
22	6.98	4	0.97	4	86.1	4
23	7.32	5	1.61	5	78.2	5
AVERAGE FOR THE DAY	6.85	10	1.34	10	80.4	10 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.87	347	2.69	342	60.9	12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Unit up @ 1240

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.10	5	1.32	5	81.4	5
1	7.11	2	1.01	2	85.9	2
2	7.10	5	1.06	5	85.1	5
3	7.17	5	1.01	5	85.8	5
4	7.16	5	1.18	5	83.4	5
5	7.18	5	1.54	5	78.6	5
6	7.07	5	1.85	5	73.9	5
7	7.22	5	2.08	5	71.2	5
8	7.22	5	2.39	5	66.9	5
9	7.18	5	2.59	5	63.9	5
10	7.26	5	2.67	5	63.2	5
11	7.24	5	2.54	5	64.9	5
12	7.10	5	2.18	5	69.3	5
13	7.05	5	2.08	5	70.5	5
14	7.09	4	2.47	4	65.2	4
15	7.02	5	2.76	5	60.7	5
16	6.93	4	2.79	4	59.8	4
17	6.95	5	2.20	5	68.3	5
18	6.99	4	2.13	4	69.5	4
19	6.82	4	2.26	4	66.8	4
20	6.77	5	2.06	5	69.5	5
21	6.80	4	2.08	4	69.5	4
22	6.80	5	2.13	5	68.7	5
23	6.81	5	2.24	5	67.1	5
AVERAGE FOR THE DAY	7.05	24	2.03	24	71.2	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.90	353	2.61	348	62.1	12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.78	5	2.05	5	69.7	5
2	6.79	5	1.97	5	71.0	5
3	6.88	4	1.36	4	80.3	4
4	Unit down @ 0350 - Limestone supply problems					
5			Boiler tube leak			
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	6.82	3	1.79	3	73.7	3 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Boiler down					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23	6.90	5	2.03	5	70.6	5
AVERAGE FOR THE DAY	6.90	1	2.03	1	70.6	1 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS					

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 8, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10	Unit up @ 1030					
11	Data acquisition system down					
12						
13						
14						
15						
16						
17	6.89	5	0.87	5	87.4	5
18	6.90	5	1.17	5	83.1	5
19	6.90	1	1.36	1	80.3	1
20	6.91	5	1.47	5	78.8	5
21	6.87	5	1.69	5	75.5	5
22	6.93	5	1.81	5	73.8	5
23						
AVERAGE FOR THE DAY	6.90	6	1.39	6	79.7	5 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.88	335	2.51	330	63.6	11 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                        MAR 9, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0       6.88    5    2.38    5    65.5    5
     1       6.83    5    2.58    5    62.3    5
     2       6.78    5    2.56    5    62.3    5
     3       6.80    5    2.55    5    62.5    5
     4       6.78    5    2.55    5    62.4    5
     5       6.89    5    2.37    5    65.6    5
     6       6.90    4    2.40    4    65.3    4
     7       6.88    5    1.96    5    71.5    5
     8       6.82    5    1.98    5    71.0    5
     9       6.71    5    2.17    5    67.6    5
    10       6.72    5    2.25    4    66.5    4
    11       6.70    5    2.52    5    62.3    5
    12
    13       6.59    5    2.51    5    61.8    5
    14       6.63    3    2.51    3    62.2    3
    15       6.69    3    2.22    3    66.8    3
    16       6.60    5    2.18    5    67.0    5
    17       6.63    5    2.22    5    66.6    5
    18       6.67    5    2.40    5    64.0    5
    19       6.70    4    2.43    4    63.7    4
    20       6.63    2    1.61    2    75.7    2
    21       6.67    5    1.51    5    77.4    5
    22       6.80    5    1.36    5    80.1    5
    23       6.53    5    1.12    5    82.9    5


 AVERAGE
 FOR THE    6.73   23    2.19   23    67.5   23 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY    6.86  335    2.42  330    64.8   11 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.55	5	1.04	5	84.1	5	
1	6.43	5	0.99	5	84.6	5	
2	6.45	5	1.01	5	84.4	5	
3	6.40	5	1.00	5	84.4	5	
4	6.39	5	1.04	5	83.8	5	
5	6.49	5	1.19	5	81.6	5	
6	6.47	5	1.07	5	83.4	5	
7	6.46	5	1.02	5	84.2	5	
8	6.51	5	1.20	4	81.5	4	
9	6.56	3	1.85	3	71.7	3	
10	6.36	5	1.81	5	71.5	5	
11	Audit run on S-1 inlet						
12							
13							
14							
15							
16							
17							
18							
19	6.29	4	2.43	3	61.4	3	
20	6.34	5	2.19	5	65.5	5	
21	6.29	5	1.69	5	73.1	5	
22	6.35	5	1.46	5	77.0	5	
23	6.44	5	1.24	5	80.8	5	
AVERAGE FOR THE DAY	6.43	16	1.39	16	78.3	16	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.84	334	2.28	329	66.7	11	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.47	5	1.22	5	81.1	5	
1	6.44	5	1.10	5	82.9	5	
2	6.46	5	1.03	5	84.1	5	
3	6.42	5	0.91	4	85.8	4	
4	6.40	5	0.88	5	86.3	5	
5	6.45	5	1.03	5	84.0	5	
6	6.47	5	1.14	5	82.4	5	
7	6.45	5	1.46	5	77.5	5	
8	6.47	5	1.52	5	76.5	5	
9	6.49	5	1.67	5	74.2	5	
10	6.45	5	1.54	5	76.1	5	
11	6.47	5	1.54	5	76.2	5	
12	6.42	5	1.58	5	75.3	5	
13	6.39	4	1.57	4	75.4	4	
14	6.41	4	1.50	4	76.7	4	
15	6.38	5	1.63	5	74.5	5	
16	6.39	5	1.38	4	78.4	4	
17	6.39	5	1.38	5	78.5	5	
18	6.43	5	1.36	5	78.8	5	
19	6.44	3	1.03	3	84.0	3	
20	6.71	5	1.03	5	84.7	5	
21	6.68	5	1.06	5	84.1	5	
22	6.72	5	1.11	5	83.5	5	
23	6.75	5	0.96	5	85.8	5	
AVERAGE FOR THE DAY	6.48	24	1.28	24	80.3	24	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.83	336	2.10	331	69.2	11	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.83	5	0.77	5	88.8	5	
1	6.87	5	0.86	5	87.5	5	
2	6.93	5	0.90	5	87.0	5	
3	6.86	5	0.79	5	88.5	5	
4	6.81	5	0.89	4	86.9	4	
5	6.85	5	1.24	5	81.9	5	
6	6.87	5	1.34	4	80.4	4	
7	6.91	5	1.37	5	80.1	5	
8	6.79	5	1.25	5	81.6	5	
9	6.76	5	1.24	5	81.7	5	
10	6.70	5	1.27	5	81.1	5	
11	6.70	5	1.23	5	81.6	5	
12	6.67	5	1.26	5	81.1	5	
13	6.68	4	1.27	4	81.0	4	
14	6.66	4	1.24	4	81.4	4	
15	6.64	3	1.22	3	81.6	3	
16							
17	6.53	1	1.06	1	83.8	1	
18	6.48	5	1.00	5	84.6	5	
19	6.47	5	0.93	5	85.7	5	
20	6.57	4	0.94	4	85.7	4	
21	6.47	5	0.96	5	85.2	5	
22	6.46	4	0.97	4	85.0	4	
23	6.58	5	0.92	5	86.1	5	
AVERAGE FOR THE DAY	6.70	23	1.08	23	83.8		22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.83	353	2.01	348	70.6		12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 13, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.74	5	0.77	5	88.6	5
1	6.77	5	0.79	5	88.3	5
2	6.75	5	0.86	5	87.3	5
3	6.79	5	0.72	5	89.5	5
4	6.80	5	0.84	5	87.7	5
5	6.81	5	0.87	5	87.3	5
6	6.81	5	1.00	5	85.3	5
7	6.78	5	1.04	4	84.6	4
8	6.79	5	0.91	5	86.5	5
9	6.79	5	1.14	5	83.3	5
10	6.70	5	1.12	5	83.3	5
11	6.72	3	1.00	3	85.1	3
12	6.68	5	1.07	5	83.9	5
13	6.64	5	0.95	5	85.7	5
14	Daily span and zero					
15	6.92	1	1.10	1	84.1	1
16	6.72	5	1.08	5	83.9	5
17	6.68	5	0.98	5	85.3	5
18						
19	6.75	1	1.44	1	78.6	1
20	6.81	5	1.17	5	82.8	5
21	6.80	5	1.19	5	82.6	5
22	6.81	4	1.16	4	82.9	4
23	6.88	5	0.88	5	87.2	5
AVERAGE FOR THE DAY	6.77	22	1.00	22	85.6	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.84	359	1.87	354	72.6	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	7.11	5	0.82	5	88.5	5	
1	7.11	5	0.81	5	88.7	5	
2	6.91	3	0.76	3	89.0	3	
3	6.93	5	0.69	5	90.0	5	
4	6.90	5	0.77	5	88.9	5	
5	6.99	5	0.75	5	89.3	5	
6	6.98	2	0.97	2	86.1	2	
7							
8	6.93	3	0.95	3	86.3	3	
9	6.86	5	1.03	5	85.0	5	
10	6.82	5	0.88	5	87.1	5	
11	6.84	5	0.94	5	86.2	5	
12	6.79	5	1.08	5	84.1	5	
13	6.80	5	1.12	5	83.5	5	
14	6.76	5	1.20	5	82.2	5	
15	6.78	5	1.14	5	83.2	5	
16	6.81	5	1.09	5	84.0	5	
17	6.77	5	1.26	5	81.4	5	
18	6.77	3	1.28	3	81.1	3	
19	6.61	4	1.67	4	74.7	4	
20	6.68	2	1.31	2	80.4	2	
21	6.71	5	1.21	5	81.9	5	
22	6.77	5	1.04	5	84.7	5	
23	6.77	5	0.98	5	85.6	5	
AVERAGE FOR THE DAY	6.84	23	1.03	23	84.9	23	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.86	358	1.69	355	75.5	13	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 15, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.76	5	0.63	5	90.7	5	
1	6.66	5	0.57	5	91.5	5	
2	6.64	5	0.44	5	93.4	5	
3	6.62	5	0.43	5	93.5	5	
4	6.56	5	0.45	5	93.1	5	
5	6.54	5	0.65	5	90.1	5	
6	6.50	5	0.75	5	88.5	5	
7	6.50	5	0.74	5	88.6	5	
8	6.49	5	0.84	5	87.1	5	
9	6.75	5	1.04	5	84.6	5	
10	6.95	5	1.12	5	83.9	5	
11	6.96	5	1.08	5	84.4	5	
12	6.86	5	1.09	5	84.1	5	
13	6.81	5	1.08	5	84.2	5	
14	6.87	4	1.03	4	85.0	4	
15	6.86	5	0.99	5	85.5	5	
16	6.83	5	0.97	5	85.8	5	
17	6.91	5	1.13	5	83.6	5	
18	6.87	5	1.38	5	79.8	5	
19	6.93	3	1.71	3	75.3	3	
20	6.95	5	1.37	5	80.2	5	
21	7.02	5	1.18	5	83.1	5	
22	7.01	5	0.94	5	86.5	5	
23	7.01	5	0.88	5	87.4	5	
AVERAGE FOR THE DAY	6.79	24	0.94	24	86.3	24	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.87	360	1.49	359	78.3	13	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           MAR 16, 1981

           E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
  HOUR     LB.SO2 OF   LB.SO2 OF    EFF.   OF
           /MMBTU PTS  /MMBTU PTS    %     PTS

    0
    1
    2       7.11   4    0.40   4    94.3    4
    3       6.99   4    0.38   5    94.4    4
    4       6.95   5    0.37   5    94.6    5
    5       7.10   5    0.81   5    88.6    5
    6       7.18   5    0.99   5    86.3    5
    7       7.17   5    1.47   5    79.4    5
    8       7.15   5    1.24   5    82.6    5
    9       7.16   4    1.36   4    81.0    4
   10       7.15   5    1.13   5    84.2    5
   11       7.10   5    1.17   5    83.5    5
   12       7.04   5    1.22   5    82.7    5
   13       7.08   5    0.75   5    89.4    5
   14       7.07   5    1.04   5    85.3    5
   15       7.07   5    0.99   5    85.9    5
   16       7.08   5    0.89   5    87.4    5
   17       7.13   5    0.89   5    87.5    5
   18       7.09   3    0.90   3    87.4    3
   19       7.10   4    0.89   4    87.5    4
   20       7.09   5    0.81   5    88.6    5
   21       7.12   5    0.48   5    93.3    5
   22       7.09   5    0.52   5    92.6    5
   23       7.02   5    0.40   5    94.3    5


 AVERAGE
 FOR THE    7.09  22    0.87  22    87.8   22 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY    6.89  363   1.32  362   80.8   13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.96	2	0.25	2	96.4	2
2	6.99	5	0.30	5	95.7	5
3	7.09	5	1.25	5	82.3	5
4	7.01	5	0.38	5	94.6	5
5	6.92	5	0.48	5	93.1	5
6	6.98	5	0.84	5	88.0	5
7	6.91	5	0.74	5	89.3	5
8	6.87	5	0.78	5	88.7	5
9	6.78	5	0.78	5	88.5	5
10	6.75	5	0.90	5	86.6	5
11	6.69	5	0.94	5	85.9	5
12	6.68	5	0.88	5	86.8	5
13	6.68	5	0.75	5	88.8	5
14	6.63	5	0.73	5	89.0	5
15	6.66	5	0.73	5	89.1	5
16	6.61	5	0.68	5	89.8	5
17	6.59	4	0.67	4	89.8	4
18	6.58	5	0.57	5	91.3	5
19	6.62	3	0.58	3	91.2	3
20	6.66	2	0.53	2	92.0	2
21	6.69	5	0.49	5	92.7	5
22	6.73	5	0.65	5	90.3	5
23	6.77	5	0.38	5	94.4	5
AVERAGE FOR THE DAY	6.78	23	0.66	23	90.2	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.87	377	1.21	376	82.3	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 18, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.63	5	0.42	5	93.7	5
1	6.62	5	0.35	5	94.7	5
2	6.68	5	0.35	5	94.8	5
3	6.75	5	0.39	5	94.2	5
4	6.69	5	0.45	5	93.3	5
5	6.78	5	0.49	5	92.8	5
6	6.80	5	0.54	5	92.0	5
7	6.92	5	0.74	5	89.3	5
8	6.89	5	1.08	5	84.3	5
9	6.93	5	1.02	5	85.3	5
10	6.90	5	0.96	5	86.2	5
11	6.87	5	0.96	5	86.0	5
12	6.83	5	0.86	5	87.4	5
13	6.86	5	0.72	5	89.5	5
14	6.86	5	0.68	5	90.1	5
15	6.84	5	0.59	5	91.4	5
16	6.85	5	0.36	5	94.8	5
17	6.89	5	0.28	5	95.9	5
18	6.92	5	0.31	5	95.6	5
19	6.93	5	0.45	5	93.5	5
20	6.94	5	0.89	5	87.2	5
21	6.94	2	0.95	2	86.4	5
22	6.94	4	1.00	4	85.6	2
23	7.03	5	0.85	5	87.9	4
						5
AVERAGE FOR THE DAY	6.84	24	0.65	24	90.5	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.87	401	1.18	400	82.8	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                          MAR 19, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0     6.98     5    0.75    5    89.3    5
     1     6.99     5    0.67    5    90.5    5
     2     6.96     5    0.69    5    90.1    5
     3     7.02     5    0.69    5    90.2    5
     4     7.06     5    0.57    5    91.9    5
     5     7.06     1    1.00    1    85.8    1
     6     7.06     5    0.76    5    89.2    5
     7     7.10     5    0.72    5    89.8    5
     8     7.12     5    0.81    5    88.7    5
     9     7.11     5    0.62    5    91.2    5
    10     7.07     5    0.43    5    93.9    5
    11     7.14     5    0.56    5    92.1    5
    12     7.12     3    0.47    3    93.3    3
    13     7.05     5    0.54    5    92.3    5
    14     7.01     2    0.59    2    91.6    2
    15     7.04     5    0.60    5    91.5    5
    16     7.01     3    0.69    3    90.1    3
    17     7.26     3    0.80    3    88.9    3
    18     7.18     5    0.70    5    90.3    5
    19     7.29     2    1.12    1    84.4    1
    20     7.00     3    0.71    3    89.8    3
    21     7.00     5    0.83    5    88.1    5
    22     7.04     5    0.72    5    89.7    5
    23     7.21     5    0.94    5    87.0    5


 AVERAGE
 FOR THE   7.08    24    0.71   24    90.4   22 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   6.88   425    1.15  424    83.2   16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 20, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	7.31	5	0.89	5	87.8	5	
1	7.43	5	0.95	5	87.2	5	
2	7.52	5	0.91	5	87.8	5	
3	7.57	5	0.86	5	88.7	5	
4	7.60	5	0.92	5	87.9	5	
5	7.59	5	0.90	5	88.1	5	
6	7.57	5	0.77	5	89.8	5	
7							
8	7.57	4	1.09	4	85.6	4	
9	7.58	5	1.14	5	85.0	5	
10	7.57	5	1.25	5	83.5	5	
11	7.57	5	1.19	5	84.3	5	
12	7.53	5	1.10	5	85.5	5	
13	7.57	5	1.25	5	83.5	5	
14	7.58	5	1.18	5	84.4	5	
15	7.95	5	0.80	5	89.9	5	
16	7.61	5	0.78	5	89.7	5	
17	7.76	5	1.02	5	86.8	5	
18	9.46	1	1.18	5	86.3	1	
19	Daily span and zero						
20	Daily span and zero						
21	7.35	1	1.41	1	80.8	1	
22	7.32	5	1.28	5	82.5	5	
23	7.06	5	1.16	5	83.6	5	
AVERAGE FOR THE DAY	7.62	21	1.05	21	86.4		19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.92	446	1.15	445	83.4		17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 21, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1	7.09	5	0.81	5	88.6	5	
2	7.01	5	0.79	5	88.8	5	
3	7.01	5	0.65	5	90.7	5	
4	7.04	5	0.61	5	91.4	5	
5	7.03	5	0.55	5	92.2	5	
6	7.03	5	0.57	5	91.9	5	
7	7.06	5	0.68	5	90.3	5	
8	7.05	5	0.83	5	88.2	5	
9	7.07	5	0.79	5	88.8	5	
10	7.09	5	0.71	5	89.9	5	
11	7.08	5	0.73	5	89.7	5	
12	7.06	5	0.69	5	90.2	5	
13	7.07	5	0.70	5	90.2	5	
14	7.07	5	0.68	5	90.2	5	
15	7.15	5	0.69	5	90.3	5	
16	7.18	3	0.68	3	90.5	3	
17	Reich test being run						
18	7.12	2	0.67	2	90.6	2	
19	Daily zero and span						
20	7.29	5	0.99	5	86.4	5	
21	7.04	5	0.76	5	89.1	5	
22	7.04	5	0.74	5	89.5	5	
23	7.17	5	0.55	5	92.3	5	
AVERAGE FOR THE DAY	7.08	21	0.71	21	90.0		21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.92	467	1.13	466	83.7		18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.97	5	0.63	5	90.9	5
2	6.98	5	0.68	5	90.3	5
3	6.97	5	0.67	5	90.4	5
4	6.98	5	0.68	5	90.2	5
5	7.02	5	0.70	5	90.0	5
6	7.07	5	0.70	5	90.1	5
7	7.10	5	0.67	5	90.6	5
8	7.08	5	0.71	5	89.9	5
9	7.10	5	0.79	5	88.8	5
10	7.13	5	0.86	5	87.9	5
11						
12	7.17	5	1.16	5	83.8	5
13	7.28	5	1.35	5	81.5	5
14	7.26	5	1.32	5	81.8	5
15						
16	7.31	4	0.71	4	90.2	4
17	7.15	5	0.65	5	90.9	5
18	6.69	4	0.66	4	90.1	4
19						
20						
21						
22	6.95	2	0.72	2	89.6	2
23	6.92	5	0.67	5	90.4	5
AVERAGE FOR THE DAY	7.06	18	0.80	18	88.7	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.93	485	1.12	484	83.9	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Intermittant data acquisition system failures

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.92	5	0.73	5	89.4	5
1	6.90	5	0.70	5	89.9	5
2	6.96	5	0.69	5	90.1	5
3	6.99	5	0.71	5	89.8	5
4	6.96	5	0.75	5	89.2	5
5	6.91	5	0.76	5	89.0	5
6	6.89	5	0.64	5	90.7	5
7	6.86	5	0.78	5	88.6	5
8	6.83	5	0.64	5	90.7	5
9	6.81	5	0.59	5	91.4	5
10	6.76	5	0.60	5	91.1	5
11	6.76	5	0.56	5	91.7	5
12	6.76	5	0.54	5	92.0	5
13	6.78	5	0.45	5	93.3	5
14	6.76	5	0.38	5	94.3	5
15	6.73	5	0.41	5	93.9	5
16	6.76	5	0.47	5	93.1	5
17	6.75	5	0.50	5	92.6	5
18	6.77	5	0.87	5	87.1	5
19	6.73	4	0.44	4	93.4	4
20	6.80	2	0.37	2	94.5	2
21	6.77	5	0.40	5	94.0	5
22	6.74	5	0.68	5	89.9	5
23	6.80	5	0.82	5	88.0	5
AVERAGE FOR THE DAY	6.82	24	0.60	24	91.2	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.92	509	1.09	508	84.2	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.86	5	1.23	5	82.1	5
2	6.83	5	1.19	5	82.5	5
3	6.83	5	0.78	5	88.5	5
4	6.87	5	0.76	5	89.0	5
5	6.97	5	0.81	5	88.4	5
6	6.85	5	0.81	5	88.2	5
7	6.93	5	0.75	5	89.1	5
8	6.92	5	0.79	5	88.6	5
9	6.83	5	0.87	5	87.2	5
10	6.74	5	0.88	5	87.0	5
11	6.79	5	0.88	5	87.0	5
12	6.76	5	0.78	5	88.5	5
13	6.74	3	0.65	3	90.3	3
14	6.77	5	0.71	5	89.5	5
15	6.75	4	0.75	4	88.9	4
16	6.83	5	0.70	5	89.8	5
17	6.88	5	0.72	5	89.6	5
18	6.90	5	0.65	5	90.6	5
19	7.32	1	0.70	1	90.5	1
20	Daily span and zero					
21	6.96	1	0.82	1	88.3	1
22	6.99	5	0.90	5	87.2	5
23	7.03	5	0.99	5	85.9	5
AVERAGE FOR THE DAY	6.88	22	0.82	22	87.9	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.92	531	1.08	530	84.4	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.02	5	0.96	5	86.4	5
1	7.05	5	0.86	5	87.8	5
2	7.13	5	0.93	5	86.9	5
3	7.10	5	0.96	4	86.5	4
4	7.01	5		0		0
5	7.01	5		0		0
6	7.03	5		0		0
7	7.03	5	1.32	1	81.3	1
8	6.96	5		0		0
9	7.00	4	0.86	1	87.7	1
10	6.95	5	0.84	5	87.9	5
11	6.94	5	0.86	5	87.6	5
12	6.95	5	0.86	4	87.7	4
13	6.97	5	0.84	5	88.0	5
14	6.94	3	0.80	3	88.5	3
15	6.93	5	0.72	5	89.6	5
16	6.93	5	0.80	5	88.4	5
17	6.93	5	0.75	5	89.2	5
18	6.95	4	1.09	4	84.3	4
19						
20	6.80	3	0.77	3	88.7	3
21	6.83	5	0.63	5	90.8	5
22	6.81	5	0.58	5	91.6	5
23	6.81	5	0.60	5	91.2	5
AVERAGE FOR THE DAY	6.96	23	0.84	19	88.3	17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.92	554	1.07	549	84.5	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Outlet O_2 monitor down ↓

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     MAR 26, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0       6.78    5    0.66    5    90.3    5
    1       6.83    5    0.66    5    90.4    5
    2       6.79    5    0.56    5    91.8    5
    3       6.76    5    0.53    5    92.2    5
    4       6.79    5    0.67    5    90.2    5
    5       6.74    5    0.75    5    88.9    5
    6       6.79    5    0.78    5    88.6    5
    7       6.79    5    0.83    5    87.7    5
    8       6.81    5    0.87    5    87.3    5
    9       6.79    5    0.58    5    91.5    5
   10       6.77    5    0.80    5    88.1    5
   11       6.77    5    0.90    5    86.7    5
   12       6.78    5    0.97    5    85.7    5
   13       6.74    5    0.97    5    85.6    5
   14       6.69    5    0.91    5    86.4    5
   15       6.66    5    0.94    5    85.9    5
   16       6.69    3    0.98    3    85.3    3
   17       6.71    3    0.86    3    87.2    3
   18       6.67    5    0.86    5    87.1    5
   19       6.68    5    0.71    5    89.4    5
   20       6.73    5    0.87    5    87.0    5
   21       6.74    5    0.77    5    88.5    5
   22       6.75    5    0.75    5    88.9    5
   23       6.70    5    0.66    5    90.1    5

 AVERAGE
 FOR THE    6.75   24    0.78   24    88.4   24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.92  578    1.06  573    84.7   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                          MAR 27, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0
     1
     2       6.62    5    0.56    5    91.5    5
     3       6.60    5    0.49    5    92.6    5
     4       6.61    5    0.49    5    92.6    5
     5       6.56    5    0.65    4    90.1    4
     6       6.54    5    0.65    5    90.1    5
     7       6.52    5    0.60    5    90.8    5
     8       6.54    5    0.63    5    90.4    5
     9       6.51    5    0.39    5    94.0    5
    10       6.52    4    0.44    4    93.3    4
    11       6.50    5    0.49    5    92.4    5
    12       6.48    5    0.48    5    92.6    5
    13       6.50    5    0.46    5    93.0    5
    14       6.49    5    0.45    5    93.1    5
    15       6.48    5    0.41    5    93.6    5
    16       6.49    5    0.46    5    92.9    5
    17       6.53    5    0.46    5    93.0    5
    18       6.48    2    0.43    2    93.4    2
    19       6.58    3    0.41    3    93.8    3
    20       6.57    5    0.42    5    93.6    5
    21       6.54    5    0.45    5    93.2    5
    22       6.56    5    0.35    5    94.7    5
    23       6.69    5    0.32    5    95.2    5

 AVERAGE
 FOR THE     6.54   22    0.48   22    92.7   22 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     6.90  591    1.04  586    84.9   23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           MAR 28, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR      LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0        6.71    2    0.32    2    95.3    2
    1        6.73    5    0.28    5    95.8    5
    2        6.74    5    0.28    5    95.9    5
    3        6.76    5    0.28    5    95.9    5
    4        6.81    5    0.30    5    95.6    5
    5        6.79    5    0.26    5    96.1    5
    6        6.79    5    0.32    5    95.3    5
    7        6.86    5    0.30    5    95.6    5
    8        6.81    5    0.35    5    94.8    5
    9        6.77    5    0.53    5    92.2    5
   10        6.61    5    0.57    5    91.3    5
   11        6.57    5    0.46    5    93.0    5
   12        6.60    5    0.50    5    92.4    5
   13        6.60    5    0.48    5    92.7    5
   14        6.56    5    0.51    5    92.2    5
   15        6.57    5    0.81    5    87.6    5
   16        6.54    5    0.78    5    88.0    5
   17        6.49    1    0.56    1    91.4    1
   18        6.54    5    0.44    5    93.3    5
   19        6.53    5    0.40    5    93.8    5
   20        6.51    5    0.39    5    94.0    5
   21        6.49    5    0.42    5    93.6    5
   22        6.51    5    0.33    5    95.0    5
   23        6.56    4    0.37    4    94.4    4

AVERAGE
FOR THE     6.64   24    0.43   24    93.6   23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     6.90  594    1.01  590    85.3   23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 29, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Relay switch in control unit of SO_2 monitors down					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14	6.48	4	0.51	4	92.1	4
15	6.48	5	0.53	5	91.8	5
16	6.59	5	0.55	5	91.7	5
17	6.62	5	0.55	5	91.7	5
18	6.72	2	0.59	2	91.2	2
19	6.78	5	0.71	5	89.6	5
20	6.78	5	0.61	5	91.1	5
21	6.81	5	0.55	5	92.0	5
22	6.82	5	0.37	5	94.6	5
23	6.83	5	0.43	5	93.7	5
AVERAGE FOR THE DAY	6.69	10	0.54	10	91.9	10 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.89	587	1.00	582	85.5	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAR 30, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.98	4	0.40	4	94.3	4
1	6.92	5	0.49	5	92.9	5
2	6.93	5	0.59	5	91.5	5
3	6.91	5	0.50	5	92.7	5
4	6.93	5	0.56	5	91.9	5
5	6.95	5	0.62	5	91.1	5
6	6.93	5	0.37	5	94.7	5
7	6.90	5	0.33	5	95.2	5
8	6.90	5	0.41	5	94.0	5
9	6.81	5	0.55	5	91.9	5
10	6.85	5	0.45	5	93.4	5
11	6.86	5	0.39	5	94.3	5
12	6.85	5	0.35	5	94.9	5
13	6.82	5	0.36	5	94.8	5
14	6.92	5	0.37	5	94.6	5
15	6.96	5	0.38	5	94.6	5
16	6.97	5	0.34	5	95.1	5
17	6.98	1	0.35	1	95.0	1
18	Control unit of SO_2 monitors down					
19	Control unit of SO_2 monitors down					
20	6.80	2	0.47	2	93.0	2
21	6.73	4	0.51	4	92.4	4
22	Control unit down					
23	Control unit down					
AVERAGE FOR THE DAY	6.90	20	0.44	20	93.5	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.88	584	0.97	579	85.8	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                          MAR 31, 1981

                E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
        HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
               /MMBTU   PTS  /MMBTU  PTS    %     PTS

          0               0            0            0
          1               0            0            0
          2               0            0            0
          3               0            0            0
          4               0            0            0
          5               0            0            0
          6               0            0            0
          7               0            0            0
          8               0            0            0
          9               0            0            0
         10               0            0            0
         11               0            0            0
         12               0            0            0
         13               0            0            0
         14               0            0            0
         15               0            0            0
         16               0            0            0
         17               0            0            0
         18               0            0            0
         19               0            0            0
         20               0            0            0
         21               0            0            0
         22               0            0            0
         23               0            0            0

      AVERAGE
      FOR THE             0            0            0 HOURS OF MONITORING DATA
        DAY

      ROLLING
       30 DAY
      AVERAGE    6.87    560   0.95   555   86.2   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

Unit up -
Data acquisition system down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

APR 1, 1981

HOUR	F(IN) LB.SO2 /MMBTU	NO. OF PTS	F(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.86	540	0.94	536	86.3	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Unit up -
Data acquisition system down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

APR 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.85	519	0.95	515	86.2	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Unit up -
Data acquisition system down

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           APR 3, 1981

                 F(IN)   NO.  F(OUT)  NO.  REDUC.  NO.
     HOUR        LB.SO2  OF   LB.SO2  OF    EFF.   OF
                 /MMBTU  PTS  /MMBTU  PTS    %     PTS

       0     Unit up - Data acquisition system down
       1                          |
       2                          |
       3                          |
       4                          |
       5                          |
       6                          |
       7                          |
       8                          |
       9                          |
      10                          |
      11                          |
      12                          |
      13                          |
      14                          V
      15          6.45    3    0.35    3    94.5    3
      16          6.43    5    0.43    5    93.3    5
      17          6.00    3    0.57    3    90.4    3
      18          6.40    5    0.67    5    89.5    5
      19          6.36    5    0.65    5    89.8    5
      20          6.32    5    0.51    5    92.0    5
      21          6.31    5    0.52    5    91.8    5
      22          6.31    5    0.49    5    92.3    5
      23          6.20    5    0.53    5    91.4    5

    AVERAGE
    FOR THE       6.31    9    0.53    9    91.7    9 HOURS OF MONITORING DATA
      DAY

    ROLLING
     30 DAY       6.84  526    0.94  522    86.2   20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
    AVERAGE
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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                      APR 4, 1981

              E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
     HOUR    LB.SO2  OF   LB.SO2 OF    EFF.   OF
             /MMBTU  PTS  /MMBTU PTS    %     PTS

        0     6.31    3    0.32   5    94.5    3
        1     6.55    5    0.39   5    94.0    5
        2     6.48    5    0.35   5    94.5    5
        3     6.45    5    0.39   5    94.0    5
        4     6.31    5    0.37   5    94.2    5
        5     6.37    5    0.32   5    94.9    5
        6     6.30    5    0.30   5    95.2    5
        7     6.29    5    0.31   5    95.0    5
        8     6.29    5    0.42   5    93.3    5
        9     6.27    5    0.51   5    91.8    5
       10     6.31    5    0.61   5    90.3    5
       11     6.34    5    0.41   5    93.5    5
       12     6.23    5    0.29   5    95.4    5
       13     6.20    5    0.38   5    93.9    5
       14  SO2 stratification check
       15     6.31    5    0.36   5    94.3    5
       16     6.33    3    0.41   3    93.5    3
       17
       18     6.59    3    0.45   3    93.1    3
       19     6.75    5    0.35   5    94.8    5
       20     6.65    5    0.37   5    94.4    5
       21     6.68    5    0.29   5    95.6    5
       22     6.57    5    0.35   5    94.6    5
       23     6.55    5    0.35   5    94.7    5


   AVERAGE
   FOR THE    6.41   22    0.38  22    94.1  22 HOURS OF MONITORING DATA
     DAY


   ROLLING
    30 DAY    6.83  548    0.92 544    86.5  21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                        APR 5, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0        6.69    5    0.28    5    95.8    5
    1        6.62    5    0.27    5    95.9    5
    2        6.53    5    0.31    5    95.3    5
    3        6.52    5    0.26    5    96.0    5
    4        6.54    5    0.30    5    95.4    5
    5        6.58    5    0.28    5    95.7    5
    6        6.52    5    0.29    5    95.5    5
    7        6.53    5    0.31    5    95.3    5
    8        6.66    5    0.32    5    95.2    5
    9        6.68    5    0.27    5    95.9    5
   10        6.73    5    0.30    5    95.5    5
   11        6.81    5    0.45    5    93.4    5
   12        6.79    5    0.41    5    94.0    5
   13        6.69    5    0.76    5    88.6    5
   14        6.72    5    1.05    5    84.4    5
   15        6.67    5    1.15    5    82.8    5
   16        6.59    4    0.82    4    87.6    4
   17        6.50    3    0.66    4    90.0    3
   18    Daily span and zero
   19        6.56    2    0.45    2    93.1    2
   20        6.44    5    0.42    5    93.5    5
   21        6.41    5    0.41    5    93.7    5
   22        6.45    5    0.29    5    95.4    5
   23        6.46    5    0.27    5    95.9    5


 AVERAGE
 FOR THE     6.60   23    0.45   23    93.2   23 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY     6.82  561    0.89  557    86.9   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           APR 6, 1981

             E(IN)    NO.  E(OUT)  NO.   REDUC.  NO.
   HOUR     LB.SO2    OF   LB.SO2  OF     EFF.   OF
            /MMBTU   PTS  /MMBTU  PTS     %     PTS

     0   Data acquisition system down
     1   Data acquisition system down
     2       6.46     2    0.37    2     94.3    2
     3       6.51     5    0.42    5     93.6    5
     4       6.49     5    0.38    5     94.1    5
     5       6.51     4    0.33    5     94.8    4
     6       6.47     5    0.32    5     95.0    5
     7       6.38     5    0.41    5     93.6    5
     8       6.42     5    0.30    5     95.4    5
     9       6.33     5    0.26    5     95.9    5
    10       6.27     5    0.21    4     96.6    4
    11       6.22     5    0.19    5     96.9    5
    12       6.17     5    0.21    5     96.7    5
    13       6.29     5    0.18    5     97.1    5
    14       6.29     5    0.21    5     96.6    5
    15       6.26     5    0.38    5     94.0    5
    16       6.22     4    0.22    3     96.4    3
    17       6.37     3    0.22    3     96.5    3
    18       6.39     5    0.21    5     96.7    5
    19       6.39     5    0.21    5     96.8    5
    20       6.43     5    0.21    5     96.7    5
    21       6.40     5    0.21    5     96.8    5
    22       6.41     5    0.21    5     96.7    5
    23       6.49     5    0.21    5     96.7    5

  AVERAGE
  FOR THE    6.37   22    0.27   22    95.8  22 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.79  559    0.82  555    87.9  22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

APR 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.60	3	0.23	3	96.4	3
1	6.77	5	0.25	5	96.3	5
2	6.95	5	0.24	5	96.5	5
3	6.92	5	0.25	5	96.3	5
4	7.00	5	0.26	5	96.3	5
5	7.01	5	0.27	5	96.2	5
6	6.88	5	0.25	5	96.4	5
7	6.82	5	0.23	5	96.6	5
8	6.82	4	0.27	4	96.0	4
9	6.67	1		0		0
10	6.67	4	0.28	4	95.8	4
11	Data acquisition system down					
12	Data acquisition system down					
13	6.67	5	0.30	5	95.5	5
14	6.57	3	0.40	1	93.9	1
15	6.70	5	0.36	3	94.6	3
16	6.77	5	0.34	5	94.9	5
17	6.80	5	0.33	5	95.1	5
18	Changing filter on SO_2 monitor stack probe					
19						
20	6.79	5	0.43	5	93.7	5
21	6.85	5	0.41	5	94.0	5
22	6.81	5	0.30	5	95.6	5
23	6.81	5	0.28	5	95.9	5
AVERAGE FOR THE DAY	6.79	20	0.30	19	95.7	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.79	573	0.80	568	88.3	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       APR 8, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS    %     PTS

       0       6.78    5    0.19    5    97.2    5
       1       6.97    5    0.33    5    95.3    5
       2       6.92    5    0.43    5    93.9    5
       3       6.92    5    0.34    5    95.0    5
       4       6.88    5    0.39    5    94.3    5
       5       6.88    5    0.40    5    94.2    5
       6       6.88    5    0.46    5    93.4    5
       7       6.85    5    0.42    5    93.9    5
       8       6.76    5    0.45    5    93.4    5
       9       6.68    5    0.42    5    93.8    5
      10       6.63    2    0.13    1    98.1    1
      11       6.63    2    0.45    2    93.2    2
      12       6.63    5    0.40    5    94.0    5
      13       6.69    5    0.38    5    94.3    5
      14       6.68    5    0.41    5    93.8    5
      15       6.66    5    0.39    5    94.1    5
      16       6.68    5    0.29    5    95.6    5
      17       6.36    5    0.55    5    90.1    5
      18       6.72    3    0.52    4    95.8    3
      19       6.71    5    0.32    5    95.2    5
      20       6.66    5    0.30    5    95.5    5
      21       6.72    5    0.31    5    95.4    5
      22       6.79    5    0.27    5    96.0    5
      23       6.82    5    0.23    5    96.7    5


   AVERAGE
   FOR THE     6.75   24    0.37   24    94.5  23 HOURS OF MONITORING DATA
     DAY


   ROLLING
    30 DAY     6.79  574    0.72  569    89.4  23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

APR 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.90	5	0.22	5	96.8	5
1	6.84	5	0.25	5	96.4	5
2	6.87	5	0.24	5	96.4	5
3	6.90	5	0.26	5	96.3	5
4	6.85	5	0.27	5	96.0	5
5	6.87	5	0.27	5	96.1	5
6	6.87	5	0.27	5	96.0	5
7	6.86	5	0.27	5	96.0	5
8	6.80	5	0.35	5	94.8	5
9		0	0.32	5		0
10		0	0.34	2		0
11		0		0		0
12		0		0		0
13						
14						
15						
16						
17						
18						
19						
20						
21	6.40	2	0.37	3	97.0	2
22	6.46	5	0.20	5	96.9	5
23	6.47	5	0.16	5	97.6	5
AVERAGE FOR THE DAY	6.76	12	0.27	14	96.4	12 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.80	570	0.69	567	89.8	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Factory representative working on O_2 monitors

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     APR 10, 1981

            E(IN)   NO. E(OUT)  NO. REDUC. NO.
    HOUR    LB.SO2  OF  LB.SO2  OF   EFF.  OF
            /MMBTU  PTS /MMBTU  PTS   %    PTS

      0      6.45    1   0.22    1   96.5   1
      1      6.42    5   0.13    5   97.9   5
      2      6.43    5   0.14    5   97.9   5
      3      6.42    5   0.13    5   98.0   5
      4      6.43    5   0.13    5   98.0   5
      5      6.37    5   0.14    5   97.9   5
      6      6.40    5   0.13    5   97.9   5
      7      6.42    5   0.14    5   97.8   5
      8      6.42    5   0.16    5   97.6   5
      9      6.39    5   0.18    5   97.2   5
     10      6.34    4   0.20    4   96.9   4
     11      6.39    1   0.18    1   97.2   1
     12      6.36    5   0.16    5   97.6   5
     13      6.34    5   0.17    5   97.3   5
     14      6.35    1   0.18    1   97.2   1
     15      6.31    5   0.26    5   95.8   5
     16      6.31    5   0.28    5   95.6   5
     17      6.32    5   0.26    5   95.9   5
     18      6.37    5   0.29    4   95.4   4
     19      6.35    5   0.31    5   95.1   5
     20      6.36    5   0.30    5   95.2   5
     21      6.36    5   0.32    5   95.0   5
     22      6.43    5   0.33    5   94.9   5
     23      6.46    5   0.21    5   96.7   5

  AVERAGE
  FOR THE    6.38   24   0.21   24   96.7  21 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.79  570   0.65  567   90.5  23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          APR 11, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0        6.67     4    0.21    4    96.9    4
     1        6.48     3    0.17    3    97.3    3
     2     S-1 down @ 0140 due to low load
     3     Inspection of S-1 intervals
     4
     5
     6
     7
     8
     9
    10
    11        6.38     5    0.15    5    97.7    5        S-1 on line @ 1045
    12        6.43     5    -.85    5     113    5
    13        6.43     5    0.12    5    98.1    5
    14
    15
    16        6.58     4    0.13    4    98.0    4
    17        6.61     5    0.10    5    98.5    5
    18        6.65     5    0.08    5    98.8    5
    19        6.63     4    0.13    4    98.0    4
    20        6.64     5    0.15    5    97.7    5
    21        6.61     5    0.16    5    97.6    5
    22        6.62     5    0.15    5    97.8    5
    23        6.63     5    0.21    5    96.9    5

 AVERAGE
 FOR THE      6.58    13    0.07   13    98.9  13 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY      6.79   560    0.61  557    90.9  22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       APR 12, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0       6.68     4    0.21    4    96.8    4
   1       6.72     5    0.22    5    96.8    5
   2       6.66     5    0.21    5    96.8    5
   3       6.73     5    0.18    5    97.3    5
   4       6.76     5    0.19    5    97.2    5
   5       6.73     5    0.17    5    97.4    5
   6       6.65     5    0.18    5    97.3    5
   7       6.60     5    0.20    5    97.0    5
   8       6.50     5    0.18    5    97.2    5
   9       6.58     5    0.21    5    96.9    5
  10       6.51     5    0.22    5    96.6    5
  11       6.50     5    0.20    5    96.9    5
  12       6.48     5    0.19    5    97.0    5
  13       6.46     5    0.18    5    97.2    5
  14       6.51     5    0.20    5    97.2    5
  15       6.47     5    0.18    5    97.0    5
  16       6.55     4    0.17    4    97.4    4
  17   Daily span and zero
  18       6.61     3    0.21    4    97.1    3
  19       6.66     4    0.15    4    97.7    4
  20       6.59     5    0.15    5    97.7    5
  21       6.58     5    0.15    5    97.8    5
  22       6.65     5    0.13    5    98.1    5
  23       6.71     5    0.16    5    97.7    5

AVERAGE
FOR THE    6.60    23    0.18   23    97.2   23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.79   561    0.58  558    91.4   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                          APR 13, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1     6.69     2    0.13    2    98.1    2
     2     6.69     5    0.14    5    98.0    5
     3     6.69     5    0.13    5    98.0    5
     4     6.76     5    0.11    5    98.4    5
     5     6.75     5    0.11    5    98.4    5
     6     6.58     5    0.13    5    98.0    5
     7     6.62     5    0.17    5    97.4    5
     8     6.50     5    0.18    5    97.2    5
     9     6.45     5    0.19    5    97.1    5
    10     6.44     3    0.25    2    96.1    2
    11     6.45     5    0.28    4    95.6    4
    12     6.45     5    0.55    5    91.5    5
    13     6.47     5    0.68    5    89.5    5
    14     6.49     5    0.52    5    92.0    5
    15     6.48     5    0.82    5    87.3    5
    16     6.46     5    0.63    5    90.2    5
    17     6.43     3    0.48    3    92.6    3
    18     6.35     2    0.46    2    92.8    2
    19     6.34     5    0.45    5    93.0    5
    20     6.34     5    0.46    5    92.7    5
    21     6.33     5    0.49    5    92.2    5
    22     6.32     5    0.53    5    91.6    5
    23     6.33     5    0.69    5    89.1    5

 AVERAGE
 FOR THE   6.50    23    0.37   23    94.2   23 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.77   561    0.55  558    91.8   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

APR 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.44	4	0.38	4	94.2	4	
1	6.68	5	0.36	5	94.5	5	
2	6.81	5	0.45	5	93.4	5	
3	6.76	5	0.56	5	91.7	5	
4	6.60	5	0.65	5	90.2	5	
5	6.68	5	0.71	5	89.3	5	
6	6.70	5	0.72	5	89.3	5	
7	6.70	5	0.74	5	88.9	5	
8	6.67	4	0.63	4	90.5	4	
9	6.77	5	0.34	5	94.9	5	
10	6.80	5	0.35	5	94.8	5	
11	6.72	5	0.37	5	94.5	5	
12	6.72	5	0.32	5	95.3	5	
13	6.73	5	0.29	5	95.7	5	
14	6.76	5	0.29	5	95.7	5	
15	6.76	5	0.27	5	95.9	5	
16	6.75	5	0.27	5	96.0	5	
17	6.79	1	0.22	1	96.8	1	
18							
19	6.50	3	0.18	3	97.3	3	
20	6.57	5	0.18	5	97.3	5	
21	6.53	5	0.22	5	96.7	5	
22	6.47	5	0.19	5	97.0	5	
23	6.43	5	0.21	5	96.8	5	
AVERAGE FOR THE DAY	6.67	23	0.39	23	94.1	22 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.77	560	0.53	557	92.2	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          APR 15, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0       6.45     5    0.26    5    96.0    5
   1       6.43     5    0.27    5    95.8    5
   2       6.26     5    0.25    5    96.0    5
   3       6.25     5    0.24    5    96.2    5
   4       6.22     5    0.24    5    96.2    5
   5       6.29     5    0.24    5    96.3    5
   6       6.30     5    0.24    5    96.2    5
   7       6.33     5    0.19    5    96.9    5
   8       6.31     5    0.21    5    96.7    5
   9       6.31     4    0.19    4    96.9    4
  10       6.24     5    0.21    5    96.7    5
  11       6.29     2    0.21    2    96.7    2
  12       6.34     2    0.21    2    96.7    2
  13    Unit down - Boiler down @ 1230
  14                 |
  15                 |
  16                 |
  17                 |
  18                 |
  19                 |
  20                 |
  21                 |
  22                 |
  23                 V


AVERAGE
FOR THE    6.31    13    0.23   13    96.4   13 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JAN 12, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0     Data Acquisition System Down
    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12      6.31    4    2.97    4    52.9    4
   13
   14              0            0            0
   15      6.09    3    3.65    1    38.3    1
   16      5.89    2    3.89    3    33.5    2
   17      5.90    4    3.87    4    34.5    4
   18      6.00    2    3.81    2    36.4    2
   19      5.94    3    3.83    3    35.6    3
   20      5.94    3    3.86    4    34.9    3
   21      5.94    4    3.86    4    35.1    4
   22      5.95    4    3.74    4    37.2    4
   23      5.97    4    3.71    4    37.8    4

 AVERAGE
 FOR THE   5.99   10    3.72   10    37.5    9 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 13, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.03	4	3.79	4	37.2	4
1	5.98	3	9.57	4	36.5	3
2	5.96	4	3.75	4	37.0	4
3	5.94	4	3.77	4	36.5	4
4	5.92	4	3.70	4	37.5	4
5	5.91	3	3.68	4	37.3	3
6	5.91	4	3.60	4	39.1	4
7	5.91	4	4.00	4	32.4	4
8	5.83	4	4.22	4	27.7	4
9	5.92	3	9.69	4	33.4	3
10	5.84	4	3.68	4	37.0	4
11	5.77	1	5.40	1	6.4	1
12	5.67	1	3.69	1	35.0	1
13	5.75	4	3.55	4	38.1	4
14	Data Acquisition System Down Intermittently					
15						
16			↓			
17	5.79	3		0		0
18						
19	5.70	2	3.93	2	31.0	2
20	5.90	4	4.25	4	27.9	4
21						
22	5.70	3	3.75	3	34.1	3
23						
AVERAGE FOR THE DAY	5.86	18	4.59	17	34.9	15 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JAN 14, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0
     1
     2
     3
     4
     5      5.92    3    3.71    3    37.4    3
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

 AVERAGE
 FOR THE    5.92    1    3.71    1    37.4    1 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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Unit Up All Day

Data Acquisition System Down Most of the Day

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                        JAN 15, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC. NO.
   HOUR   LB.SO2   OF   LB.SO2  OF   EFF.  OF
          /MMBTU  PTS  /MMBTU  PTS    %    PTS

     0
     1
     2
     3
     4
     5
     6
     7
     8     5.87     3    4.22    3   28.1   3
     9     5.90     3   12.6     3   32.3   2
    10     5.90     3    4.48    2   24.2   2
    11     5.98     2    4.32    2   27.7   2
    12                                        S-2 Down @ 1210
    13              0            0          0
    14              0            0          0
    15              0    4.10    3          0 S-2 Up @ 1440
    16     5.59     2    3.67    2          0
    17     5.80     1            0          0
    18     6.27     4    3.12    4   50.2   4
    19   Data Acquisition System Down
    20               |
    21               |
    22               |
    23               v


 AVERAGE
 FOR THE   5.90     7    5.21    7   32.5   5 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 16, 1981

Data Acquisition System Down Most of the Day

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6						
7						
8	6.78	3		0		0
9	6.69	2	4.37	2	34.8	2
10	6.66	4	4.20	2	37.0	2
11						
12						
13						
14						
15						
16						
17						
18	6.38	3	4.27	3	33.0	3
19	6.43	4	3.59	4	44.1	4
20	6.48	4	4.20	4	35.2	4
21	6.52	4	4.15	4	36.4	4
22	6.58	4	4.22	4	35.9	4
23	6.61	4	4.14	4	37.4	4
AVERAGE FOR THE DAY	6.57	9	4.14	8	36.7	8 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.73	4	4.19	4	37.7	4
1	6.67	4	4.20	4	37.1	4
2	6.61	4	4.28	4	35.2	4
3	6.62	4	4.27	4	35.5	4
4	6.59	4	4.31	4	34.6	4
5	6.63	4	4.27	4	35.6	4
6	6.60	4	4.25	4	35.6	4
7	6.62	4	4.38	4	33.8	4
8						
9	6.57	4	4.27	4	35.0	4
10	6.52	4	3.98	4	39.0	4
11	6.53	4	4.04	4	38.1	4
12	6.49	4	3.91	4	39.7	4
13	6.66	2	4.07	1	38.2	1
14	Outlet O Monitor Down					
15	S-2 Down @ 1540 - Boiler Down					
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	6.60	13	4.19	13	36.4	12 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 18, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2	7.18	4	4.15	4	42.2	4
3	7.13	3	3.85	3	45.9	3
4	7.04	4	3.77	4	46.4	4
5	6.95	3	3.71	3	46.6	3
6	6.95	4	3.70	4	46.7	4
7	6.99	4	3.69	4	47.2	4
8	6.89	4	3.35	4	51.4	4
9	6.93	4	2.85	4	58.9	4
10	6.78	4	2.96	4	56.3	4
11	6.80	4	2.88	4	57.6	4
12	6.34	2	2.64	2	58.4	2
13	6.30	4	2.62	4	58.5	4
14		0		0		0
15	6.41	1	2.53	1	60.6	1
16	6.73	3	3.22	3	52.1	3
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	6.82	14	3.28	14	51.4	13 HOURS OF MONITORING DATA

S-2 up @ 0130

Both O_2 Analyzers Down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 19, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.98	3	2.48	3	68.9	3
1						
2	7.39	2	2.39	2	67.6	2
3						
4	7.27	4	2.43	4	66.5	4
5	7.04	4	2.46	4	65.1	4
6	6.90	4	2.55	4	63.1	4
7	6.94	3	2.48	3	64.2	3
8	6.90	4	2.59	4	62.4	4
9	6.92	4	2.54	4	63.3	4
10	6.91	4	2.57	4	62.8	4
11	S-2 Down @ 1050 for Maintenance					
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	7.14	9	2.50	9	64.9	9 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE — NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JAN 20, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0      6.91     4    2.18    4    68.4    4
    1      6.86     4    2.19    4    68.1    4
    2      6.97     4    2.23    4    68.0    4
    3      6.96     4    2.25    4    67.6    4
    4      6.96     4    2.33    4    66.5    4
    5      6.89     4    2.48    4    63.9    4
    6      6.88     4    2.50    4    63.7    4
    7      6.91     4    2.41    4    65.1    4
    8      6.83     1    2.44    1    64.3    1
    9   S-2 Down @ 0820 to Allow Maintenance on S-1
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23


 AVERAGE
 FOR THE   6.91     9    2.34    9    66.4    8 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JAN 21, 1981

            E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF  LB.SO2  OF    EFF.   OF
            /MMBTU PTS  /MMBTU PTS     %     PTS

      0
      1
      2
      3
      4
      5
      6
      7
      8
      9
     10
     11
     12
     13
     14  S-2 Up @ 1430
     15  S-2 Down @ 1530 - Ruptured Makeup Line
     16  S-2 Up @ 1650 - Data Acquisition System Down
     17
     18
     19      6.86   2    2.49   2    63.8    2
     20  Data Acquisition System Down
     21              ↓
     22
     23      6.84   2    2.29   2    66.5    2

 AVERAGE
 FOR THE     6.85   2    2.39   2    65.1    2 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                          JAN 22, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU   PTS  /MMBTU  PTS    %     PTS

        0     7.08     4    2.45    4    65.4    4
        1     7.22     4    2.38    4    67.0    4
        2     7.16     4    2.33    4    67.5    4
        3     6.92     4    2.27    4    67.1    4
        4     6.99     4    2.27    4    67.5    4
        5     6.98     4    2.24    4    67.9    4
        6     6.90     4    2.17    4    68.5    4
        7     6.85     4    2.13    4    68.8    4
        8     6.86     3    2.13    3    69.0    3
        9     6.88     4    2.38    4    65.5    4
       10     6.92     4    2.45    4    64.7    4
       11   Radian personnel working on data acquisition system
       12
       13
       14
       15
       16
       17
       18
       19     6.86     2    2.49    2    63.8    2
       20
       21
       22
       23


   AVERAGE
   FOR THE    6.97    12    2.31   12    66.9   12 HOURS OF MONITORING DATA
     DAY


   ROLLING
    30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
   AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-2

                        JAN 23, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2   OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %    PTS

    0               0            0            0  Radian personnel working on data acquisition
    1               0            0            0  system
    2               0            0            0
    3               0            0            0
    4               0            0            0
    5               0            0            0
    6               0            0            0
    7               0            0            0
    8               0            0            0
    9               0            0            0
   10               0            0            0  S-2 down @ 1005 - broken supernatant line
   11               0            0            0  S-2 up @ 1145
   12               0            0            0
   13               0            0            0
   14               0            0            0
   15               0            0            0
   16               0            0            0
   17               0            0            0
   18               0            0            0
   19               0            0            0
   20               0            0            0
   21               0            0            0
   22               0            0            0
   23               0            0            0


 AVERAGE
 FOR THE            0            0            0 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9	7.37	1	2.53	1	65.7	1
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY	7.37	1	2.53	1		0 HOURS OF MONITORING DATA

Radian personnel continuing to work on data acquisition system throughout the day

S-2 down @ 1230 to allow maintenance on S-1 I.D. fan expansion joint

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	S-2 still down					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17	6.48	2	2.48	2	61.8	2
18	6.80	5	3.03	5	55.4	5
19	6.79	5	3.36	5	50.5	5
20	6.86	5	3.74	5	45.5	5
21	6.82	5	3.59	5	47.3	5
22	6.91	5	3.87	5	43.9	5
23	6.93	5	3.92	5	43.5	5
AVERAGE FOR THE DAY	6.80	7	3.43	7	49.7	7 HOURS OF MONITORING DATA

S-2 up @ 1730

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 26, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.84	5	3.21	5	53.1	5
1	6.89	4	3.14	4	54.4	4
2	6.85	5	3.28	5	52.2	5
3	6.90	5	3.18	5	53.9	5
4	6.95	5	3.27	5	52.9	5
5	6.91	5	3.20	5	53.7	5
6	7.01	4	3.03	5	56.8	4
7	7.16	5	3.39	5	52.7	5
8	7.25	4	3.27	4	55.0	4
9	7.23	5	3.12	5	56.8	5
10	7.11	5	2.97	5	58.3	5
11	7.06	3	2.89	3	59.1	3
12	Certification Testing					
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	7.01	12	3.16	12	54.9	12 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 27, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1						
2						
3						
4						
5						
6						
7						
8						
9	6.87	4	3.15	4	54.1	4
10	6.79	5	3.20	5	52.9	5
11	6.77	1		0		0
12	Certification testing					
13						
14						
15	6.59	4	2.69	4	59.2	4
16	6.63	2	2.58	2	61.1	2
17	6.63	1	2.49	1	62.5	1
18	6.69	5	2.41	5	64.0	5
19	6.72	1	2.37	1	64.8	1
20	Certification testing - Method 3's					
21	6.76	5	2.34	5	65.3	5
22	6.84	5	2.01	5	70.6	5
23	6.79	4	1.78	4	73.8	4
AVERAGE FOR THE DAY	6.74	11	2.50	10	62.6	8 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.94	5	1.86	5	73.1	5
1	6.80	5	1.75	5	74.3	5
2	6.82	5	1.60	5	76.5	5
3	6.86	5	1.54	5	77.6	5
4	6.85	5	1.43	5	79.1	5
5	6.76	4	1.37	4	79.8	4
6	6.66	5	1.53	5	77.1	5
7	6.71	5	1.75	5	73.9	5
8	6.71	5	1.76	5	73.7	5
9	6.71	2	1.75	2	73.9	2
10						
11	6.62	2	1.69	2	74.5	2
12	6.93	5	1.76	5	74.6	5
13						
14						
15						
16						
17						
18	6.68	1	2.39	1	64.2	1
19	6.67	5	2.37	5	64.4	5
20	6.69	5	2.25	5	66.4	5
21	6.80	4	2.11	4	69.0	4
22						
23	6.61	1	1.96	1	70.3	1
AVERAGE FOR THE DAY	6.75	17	1.82	17	73.9	15 HOURS OF MONITORING DATA

Certification testing

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 29, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.57	3	1.55	3	76.4	3
1	6.50	5	1.44	5	77.9	5
2	6.57	5	1.38	5	79.0	5
3						
4	6.60	5	1.34	5	79.8	5
5	6.57	5	1.45	5	78.0	5
6	6.62	5	1.76	5	73.4	5
7	6.57	5	1.90	5	71.1	5
8	6.67	5	1.94	5	70.9	5
9	6.81	5	1.96	5	71.2	5
10	Certification testing					
11	6.03	1	1.97	1	67.2	1
12	6.61	1	2.26	1	65.9	1
13	6.55	5	2.55	5	61.0	5
14		0		0		0
15	6.67	1	2.70	1	59.5	1
16	Certification testing					
17	6.73	1	2.76	1	58.9	1
18	Certification testing					
19	Certification testing					
20	6.64	2	2.71	2	59.2	2
21	6.71	5	2.74	5	59.1	5
22	6.68	5	2.74	5	59.0	5
23	6.79	5	2.60	5	61.6	5
AVERAGE FOR THE DAY	6.60	18	2.10	18	69.8	14 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JAN 30, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

   0       6.81    5    2.29    5    66.4    5
   1       6.86    5    2.39    5    65.2    5
   2       6.83    5    2.21    5    67.7    5
   3       6.72    5    2.39    5    64.5    5
   4       6.74    5    2.30    5    65.9    5
   5       6.78    5    2.20    5    67.6    5
   6       6.77    5    2.27    5    66.4    5
   7       6.84    5    2.60    5    61.9    5
   8       6.83    5    2.78    5    59.4    5
   9       6.86    5    2.94    5    57.2    5
  10       6.86    4    7.88    5    59.2    4
  11   Certification testing
  12       6.63    2    2.07    2    68.8    2
  13       6.58    6    2.64    6    59.8    6
  14   Certification testing
  15       6.49    4    2.40    4    63.0    4
  16       6.44    5    2.28    5    64.6    5
  17       6.45    3    2.43    3    62.4    3
  18       6.49    5    2.53    5    61.0    5
  19       6.52    2    2.61    2    60.0    2
  20       6.55    5    2.55    5    61.0    5
  21       6.41    2    2.75    2    57.1    2
  22       6.53    5    3.06    2    53.1    2
  23       6.52    3            0            0


AVERAGE
FOR THE    6.66   22    2.74   21    62.5   21 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JAN 31, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.48	2	2.59	1	60.0	1
1	6.45	4	2.43	4	62.3	4
2	6.41	3	2.54	2	60.1	2
3	6.55	4	2.45	4	62.5	4
4	6.52	5	2.58	5	60.4	5
5	6.34	3	2.50	3	60.6	3
6	6.49	4	2.48	4	61.7	4
7	6.51	4	2.50	4	61.6	4
8	6.45	3	2.27	3	64.8	3
9		0	2.01	4		0
10	6.38	4	2.34	3	63.4	3
11	6.41	5	2.32	5	63.8	5
12	6.29	3	2.34	3	62.8	3
13	6.40	1	2.31	1	64.0	1
14		0		0		0
15	6.38	5	2.41	5	62.2	5
16	6.38	4	2.57	4	59.7	4
17	6.41	5	2.52	5	60.8	5
18	6.35	4	2.53	4	60.2	4
19	6.44	5	2.60	5	59.7	5
20	6.47	5	2.57	4	60.3	4
21	6.44	5	2.43	5	62.3	5
22	6.48	5	2.36	5	63.6	5
23	6.50	6	2.33	6	64.1	6
AVERAGE FOR THE DAY	6.43	22	2.43	23	61.8	20 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 1, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.40	2	2.28	2	64.5	2
1						
2	6.45	5	2.32	5	63.9	5
3	6.49	5	2.44	5	62.4	5
4	6.48	5	2.47	5	61.9	5
5	6.52	5	2.38	5	63.6	5
6	6.54	5	2.40	5	63.2	5
7	6.57	5	2.44	5	62.8	5
8	6.67	5	2.56	5	61.6	5
9	6.64	4	2.66	4	59.9	4
10	Data acquisition system down					
11		↓				
12						
13	6.62	2	2.78	2	58.1	2
14		0		0		0
15	6.66	5	2.84	5	57.3	5
16	6.76	3	2.91	3	57.0	3
17		0	3.20	1		0
18	Certification testing					
19	6.96	5	2.79	5	59.9	5
20	7.02	3	2.74	3	61.0	3
21	6.87	5	2.79	5	59.4	5
22	7.03	5	2.77	5	60.5	5
23	6.87	2	2.82	2	59.0	2
AVERAGE FOR THE DAY	6.68	17	2.64	18	61.0	17 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.13	5	2.84	5	60.1	5
1	7.13	1	2.82	1	60.5	1
2	7.04	5	2.86	4	59.6	4
3	7.09	5	2.54	5	64.1	5
4	7.02	5	2.46	5	64.9	5
5	7.05	5	2.55	5	63.8	5
6	6.99	5	2.47	5	64.7	5
7	6.94	5	2.56	5	63.0	5
8	6.99	5	2.59	5	62.9	5
9	7.02	4	2.56	4	63.5	4
10	7.03	5	2.87	5	59.2	5
11	7.04	5	3.00	5	57.3	5
12	7.05	5	2.87	5	59.4	5
13	7.08	5	2.83	5	60.0	5
14		0		0		0
15	7.17	5	2.95	5	58.9	5
16	7.31	5	2.97	5	59.4	5
17	7.19	4	2.98	5	58.6	4
18	6.57	2	2.81	2	57.0	2
19	6.89	5	3.00	5	56.4	5
20	6.92	5	2.93	5	57.6	5
21	6.95	5	2.98	5	57.1	5
22	6.99	5	2.99	5	57.3	5
23	6.93	5	2.93	5	57.7	5
AVERAGE FOR THE DAY	7.02	23	2.80	23	60.1	22 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.97	5	2.75	5	60.5	5
1	6.96	5	2.64	5	62.0	5
2	6.99	5	2.50	5	64.2	5
3	7.00	4	2.60	4	62.8	4
4	7.03	5	2.63	5	62.6	5
5	6.99	5	2.66	5	61.9	5
6	6.94	5	2.59	5	62.6	5
7	6.88	5	2.76	5	59.9	5
8	6.87	5	2.84	5	58.8	5
9	6.88	4	2.86	4	58.5	4
10	6.91	5	2.94	5	57.4	5
11	7.03	6	2.92	6	58.5	6
12	6.94	5	2.88	5	58.5	5
13	6.85	5	2.77	5	59.5	5
14		0		0		0
15	6.89	5	2.66	5	61.3	5
16	6.94	4	2.82	4	59.4	4
17	6.88	5	3.07	5	55.4	5
18	6.79	5	3.13	5	53.9	5
19	6.76	2	2.96	2	56.2	2
20						
21	6.74	5	2.77	4	59.6	4
22	6.84	4	2.65	4	61.3	4
23	6.89	5	2.44	5	64.6	5
AVERAGE FOR THE DAY	6.91	22	2.77	22	60.0	22 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE: NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.89	5	2.53	5	63.3	5
1	6.96	5	2.74	3	61.1	3
2	6.92	5	2.71	5	60.8	5
3	6.99	4	2.67	4	61.9	4
4	6.96	5	2.63	5	62.3	5
5	6.95	4	2.75	4	60.4	4
6	6.99	5	2.78	5	60.2	5
7	7.06	5	2.77	5	60.8	5
8	7.02	5	2.73	5	61.1	5
9	7.04	5	2.96	5	58.0	5
10	7.10	5	2.89	5	59.3	5
11	7.13	4	2.88	5	59.8	4
12	6.97	3	2.88	4	58.2	2
13	6.86	5	2.92	5	57.5	5
14	Zeroing and calibrating O_2 monitors					
15						
16						
17						
18						
19						
20	7.05	5	3.03	5	57.0	5
21						
22	6.71	2	2.85	2	57.5	2
23	6.81	4	2.72	5	60.6	4
AVERAGE FOR THE DAY	6.97	17	2.79	17	60.0	17 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.85	5	2.60	5	62.1	5
1	6.87	5	2.42	5	64.8	5
2	6.79	5	2.59	5	61.8	5
3	6.82	5	2.47	5	63.7	5
4	6.79	5	2.49	5	63.3	5
5	6.74	5	2.39	5	64.5	5
6	6.77	4	2.42	5	65.0	4
7	6.75	5	2.70	5	59.9	5
8	6.83	5	2.68	4	60.5	4
9	6.87	5	3.03	5	55.8	5
10						
11	6.74	3	3.19	5	51.2	3
12	6.73	5	3.23	5	52.0	5
13	6.73	5	3.28	5	51.3	5
14		0		0		0
15	6.65	5	3.40	4	48.9	4
16	Daily span and zero certification testing					
17	Daily span and zero certification testing					
18	6.39	4	3.35	4	47.5	4
19	6.34	5	3.13	5	50.6	5
20	6.34	5	3.08	5	51.5	5
21	6.34	3	3.08	3	51.5	3
22	5.80	4	2.93	4	49.5	4
23	6.11	5	2.65	5	56.6	5
AVERAGE FOR THE DAY	6.61	20	2.86	20	56.6	20 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.05	5	2.61	5	56.9	5
1	6.04	5	2.67	5	55.7	5
2	5.95	5	2.81	5	52.8	5
3	5.98	3	2.25	4	54.2	3
4						
5	6.07	4	2.89	4	52.5	4
6	6.00	5	2.91	5	51.6	5
7	6.00	5	2.82	5	53.0	5
8	5.99	5	2.84	5	52.6	5
9	6.08	5	3.14	5	48.3	5
10	6.02	5	2.92	5	51.4	5
11	5.98	2	3.11	2	47.9	2
12	6.10	5	3.37	5	44.6	5
13	6.10	5	3.28	5	46.2	5
14						
15	6.23	4	3.54	4	43.2	4
16	6.32	5	3.85	5	39.1	5
17	6.35	5	3.80	5	40.1	5
18	6.34	5	3.88	5	38.9	5
19	6.37	3	3.98	3	37.4	3
20	S-2 down @ 2015 - plugged recycle nozzles					
21						
22						
23						
AVERAGE FOR THE DAY	6.11	18	3.15	18	48.1	18 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                       FEB 7, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0              0            0            0
     1              0            0            0
     2              0            0            0
     3              0            0            0
     4              0            0            0
     5              0            0            0
     6              0            0            0
     7              0            0            0
     8              0            0            0
     9              0            0            0
    10              0            0            0
    11              0            0            0
    12              0            0            0
    13              0            0            0
    14              0            0            0
    15              0            0            0
    16              0            0            0
    17              0            0            0
    18              0            0            0
    19      6.49    1    3.53    1    45.6    1
    20              0            0            0
    21              0            0            0
    22              0            0            0
    23              0            0            0

  AVERAGE
  FOR THE   6.49    1    3.53    1            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
```

S-2 down - slurry recycle problems

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                       FEB 8, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0            0            0
     1               0            0            0
     2               0            0            0
     3               0            0            0
     4               0            0            0
     5               0            0            0
     6               0            0            0
     7               0            0            0
     8               0            0            0
     9               0            0            0
    10               0            0            0
    11               0            0            0
    12               0            0            0
    13               0            0            0
    14               0            0            0
    15               0            0            0
    16               0            0            0
    17               0            0            0
    18               0            0            0
    19               0            0            0
    20               0            0            0
    21               0            0            0
    22               0            0            0
    23               0            0            0


  AVERAGE
  FOR THE            0            0            0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
```

S-2 down - maintenance on slurry recycle

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                      FEB 9, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0            0            0
    1              0            0            0
    2              0            0            0
    3              0            0            0
    4              0            0            0
    5              0            0            0
    6              0            0            0
    7              0            0            0
    8              0            0            0
    9              0            0            0
   10              0            0            0
   11              0            0            0
   12              0            0            0
   13              0            0            0
   14              0            0            0
   15              0            0            0
   16              0            0            0
   17              0            0            0
   18              0            0            0
   19              0            0            0
   20              0            0            0
   21              0            0            0
   22              0            0            0
   23              0            0            0

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.65   319  2.90    317  56.3    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

S-2 down for maintenance

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                           FEB 10, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0                0            0            0      S-2 down for maintenance
    1                0            0            0
    2                0            0            0
    3                0            0            0
    4                0            0            0
    5                0            0            0
    6                0            0            0
    7                0            0            0
    8                0            0            0
    9                0            0            0
   10                0            0            0
   11                0            0            0
   12                0            0            0
   13                0            0            0
   14                0            0            0
   15                0            0            0
   16                0            0            0
   17                0            0            0
   18                0            0            0
   19                0            0            0
   20                0            0            0
   21                0            0            0
   22                0            0            0
   23                0            0            0

 AVERAGE
 FOR THE             0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.65    319   2.90   317   56.3    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          FEB 11, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0               0            0            0        S-2 down for maintenance
    1               0            0            0
    2               0            0            0
    3               0            0            0
    4               0            0            0
    5               0            0            0
    6               0            0            0
    7               0            0            0
    8               0            0            0
    9               0            0            0
   10               0            0            0
   11               0            0            0
   12               0            0            0
   13               0            0            0
   14               0            0            0
   15               0            0            0
   16               0            0            0
   17               0            0            0
   18               0            0            0
   19               0            0            0
   20               0            0            0
   21               0            0            0
   22               0            0            0
   23               0            0            0

 AVERAGE
 FOR THE            0            0           0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.65    319  2.90    317  56.3    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.67	309	2.87	307	56.9	6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

S-2 down for maintenance through
February 24

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                          FEB 13, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0            0            0
     1               0            0            0
     2               0            0            0
     3               0            0            0
     4               0            0            0
     5               0            0            0
     6               0            0            0
     7               0            0            0
     8               0            0            0
     9               0            0            0
    10               0            0            0
    11               0            0            0
    12               0            0            0
    13               0            0            0
    14               0            0            0
    15               0            0            0
    16               0            0            0
    17               0            0            0
    18               0            0            0
    19               0            0            0
    20               0            0            0
    21               0            0            0
    22               0            0            0
    23               0            0            0

 AVERAGE
 FOR THE             0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.72   291   2.77   290   58.7   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                        FEB 14, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0               0            0            0
     1               0            0            0
     2               0            0            0
     3               0            0            0
     4               0            0            0
     5               0            0            0
     6               0            0            0
     7               0            0            0
     8               0            0            0
     9               0            0            0
    10               0            0            0
    11               0            0            0
    12               0            0            0
    13               0            0            0
    14               0            0            0
    15               0            0            0
    16               0            0            0
    17               0            0            0
    18               0            0            0
    19               0            0            0
    20               0            0            0
    21               0            0            0
    22               0            0            0
    23               0            0            0


  AVERAGE
  FOR THE            0            0            0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY   6.72   290   2.77   289   58.8    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          FEB 15, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0                 0             0           0
     1                 0             0           0
     2                 0             0           0
     3                 0             0           0
     4                 0             0           0
     5                 0             0           0
     6                 0             0           0
     7                 0             0           0
     8                 0             0           0
     9                 0             0           0
    10                 0             0           0
    11                 0             0           0
    12                 0             0           0
    13                 0             0           0
    14                 0             0           0
    15                 0             0           0
    16                 0             0           0
    17                 0             0           0
    18                 0             0           0
    19                 0             0           0
    20                 0             0           0
    21                 0             0           0
    22                 0             0           0
    23                 0             0           0


  AVERAGE
  FOR THE              0             0           0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY     6.74    283   2.71    282   59.8   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                         FEB 16, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0            0            0
    1              0            0            0
    2              0            0            0
    3              0            0            0
    4              0            0            0
    5              0            0            0
    6              0            0            0
    7              0            0            0
    8              0            0            0
    9              0            0            0
   10              0            0            0
   11              0            0            0
   12              0            0            0
   13              0            0            0
   14              0            0            0
   15              0            0            0
   16              0            0            0
   17              0            0            0
   18              0            0            0
   19              0            0            0
   20              0            0            0
   21              0            0            0
   22              0            0            0
   23              0            0            0

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  6.75    274  2.67    274  60.4    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                        FEB 17, 1981

             E(IN)  NO.  E(OUT) NO.  REDUC. NO.
    HOUR    LB.SO2  OF  LB.SO2  OF    EFF.  OF
            /MMBTU  PTS /MMBTU  PTS    %    PTS

      0              0           0           0
      1              0           0           0
      2              0           0           0
      3              0           0           0
      4              0           0           0
      5              0           0           0
      6              0           0           0
      7              0           0           0
      8              0           0           0
      9              0           0           0
     10              0           0           0
     11              0           0           0
     12              0           0           0
     13              0           0           0
     14              0           0           0
     15              0           0           0
     16              0           0           0
     17              0           0           0
     18              0           0           0
     19              0           0           0
     20              0           0           0
     21              0           0           0
     22              0           0           0
     23              0           0           0


  AVERAGE
  FOR THE            0           0           0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY    6.74  260  2.64  260  60.9   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      FEB 18, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR       LB.SO2  OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0                 0            0            0
     1                 0            0            0
     2                 0            0            0
     3                 0            0            0
     4                 0            0            0
     5                 0            0            0
     6                 0            0            0
     7                 0            0            0
     8                 0            0            0
     9                 0            0            0
    10                 0            0            0
    11                 0            0            0
    12                 0            0            0
    13                 0            0            0
    14                 0            0            0
    15                 0            0            0
    16                 0            0            0
    17                 0            0            0
    18                 0            0            0
    19                 0            0            0
    20                 0            0            0
    21                 0            0            0
    22                 0            0            0
    23                 0            0            0


  AVERAGE
  FOR THE              0            0            0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY     6.73   251   2.64    251   60.8    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                         FEB 19, 1981

                E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
               /MMBTU   PTS  /MMBTU  PTS    %     PTS

        0                0            0            0
        1                0            0            0
        2                0            0            0
        3                0            0            0
        4                0            0            0
        5                0            0            0
        6                0            0            0
        7                0            0            0
        8                0            0            0
        9                0            0            0
       10                0            0            0
       11                0            0            0
       12                0            0            0
       13                0            0            0
       14                0            0            0
       15                0            0            0
       16                0            0            0
       17                0            0            0
       18                0            0            0
       19                0            0            0
       20                0            0            0
       21                0            0            0
       22                0            0            0
       23                0            0            0

    AVERAGE
    FOR THE
      DAY                0            0            0 HOURS OF MONITORING DATA

    ROLLING
     30 DAY
    AVERAGE    NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS
```

```
                     ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          FEB 20, 1981

                 E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
       HOUR      LB.SO2 OF   LB.SO2  OF    EFF.   OF
                 /MMBTU PTS  /MMBTU  PTS    %     PTS

         0               0            0            0
         1               0            0            0
         2               0            0            0
         3               0            0            0
         4               0            0            0
         5               0            0            0
         6               0            0            0
         7               0            0            0
         8               0            0            0
         9               0            0            0
        10               0            0            0
        11               0            0            0
        12               0            0            0
        13               0            0            0
        14               0            0            0
        15               0            0            0
        16               0            0            0
        17               0            0            0
        18               0            0            0
        19               0            0            0
        20               0            0            0
        21               0            0            0
        22               0            0            0
        23               0            0            0


     AVERAGE
     FOR THE             0            0            0 HOURS OF MONITORING DATA
       DAY


     ROLLING
      30 DAY   NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS
     AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                           FEB 21, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS   /MMBTU  PTS    %     PTS

      0                0             0           0
      1                0             0           0
      2                0             0           0
      3                0             0           0
      4                0             0           0
      5                0             0           0
      6                0             0           0
      7                0             0           0
      8                0             0           0
      9                0             0           0
     10                0             0           0
     11                0             0           0
     12                0             0           0
     13                0             0           0
     14                0             0           0
     15                0             0           0
     16                0             0           0
     17                0             0           0
     18                0             0           0
     19                0             0           0
     20                0             0           0
     21                0             0           0
     22                0             0           0
     23                0             0           0

   AVERAGE
   FOR THE             0             0           0 HOURS OF MONITORING DATA
     DAY

   ROLLING
    30 DAY    6.72   242   2.65   242   60.5    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          FEB 22, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0              0            0            0
     1              0            0            0
     2              0            0            0
     3              0            0            0
     4              0            0            0
     5              0            0            0
     6              0            0            0
     7              0            0            0
     8              0            0            0
     9              0            0            0
    10              0            0            0
    11              0            0            0
    12              0            0            0
    13              0            0            0
    14              0            0            0
    15              0            0            0
    16              0            0            0
    17              0            0            0
    18              0            0            0
    19              0            0            0
    20              0            0            0
    21              0            0            0
    22              0            0            0
    23              0            0            0

  AVERAGE
  FOR THE           0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY  6.72   240   2.65   240   60.5   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          FEB 23, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0              0            0            0
     1              0            0            0
     2              0            0            0
     3              0            0            0
     4              0            0            0
     5              0            0            0
     6              0            0            0
     7              0            0            0
     8              0            0            0
     9              0            0            0
    10              0            0            0
    11              0            0            0
    12              0            0            0
    13              0            0            0
    14              0            0            0
    15              0            0            0
    16              0            0            0
    17              0            0            0
    18              0            0            0
    19              0            0            0
    20              0            0            0
    21              0            0            0
    22              0            0            0
    23              0            0            0

  AVERAGE
  FOR THE           0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY
  AVERAGE    6.71  228   2.67   228   60.2   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                          FEB 24, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0              0            0            0
     1              0            0            0
     2              0            0            0
     3              0            0            0
     4              0            0            0
     5              0            0            0
     6              0            0            0
     7              0            0            0
     8              0            0            0
     9              0            0            0
    10              0            0            0
    11              0            0            0
    12              0            0            0
    13              0            0            0
    14              0            0            0
    15              0            0            0
    16              0            0            0
    17              0            0            0
    18              0            0            0
    19              0            0            0
    20              0            0            0
    21              0            0            0
    22              0            0            0
    23              0            0            0

 AVERAGE
 FOR THE            0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY
 AVERAGE    6.71   228   2.67   228   60.2    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 25, 1981

HOUR	F(IN) LB.SO2 /MMBTU	NO. OF PTS	F(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	7.15	1	1.28	1	82.1	1	
12	7.12	2	0.71	2	90.0	2	S-2 up @ 1155 ↓
13	7.01	5	0.71	5	89.9	5	
14		0		0		0	
15	7.07	1	0.99	1	86.0	1	
16	Certification testing - response time tests						
17	Certification testing - response time tests						
18	6.94	5	1.08	5	84.4	5	
19	6.98	5	1.13	5	83.8	5	
20	7.14	4	1.18	4	83.5	4	
21	7.06	5	1.34	5	81.0	5	
22	7.05	5	1.34	5	81.0	5	
23	7.10	5	1.39	5	80.5	5	
AVERAGE FOR THE DAY	7.06	10	1.12	10	84.3	8 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.72	237	2.61	237	61.2	6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       FEB 26, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
               /MMBTU  PTS  /MMBTU  PTS    %     PTS

        0       7.15    5    1.31    5    81.7    5
        1       7.17    5    1.14    5    84.0    5
        2       7.21    5    1.26    5    82.5    5
        3       7.22    5    1.29    5    82.2    5
        4       7.28    5    1.30    5    82.1    5
        5       7.20    5    1.26    5    82.5    5
        6       7.27    4    1.30    4    82.1    4
        7       7.29    5    1.44    5    80.2    5
        8       7.30    5    1.41    5    80.6    5
        9       7.32    5    1.53    5    79.1    5
       10       7.39    5    2.02    5    72.7    5
       11       7.34    5    2.22    5    69.8    5
       12       7.34    5    2.20    5    70.1    5
       13       7.36    4    2.18    4    70.3    4
       14
       15       7.13    3    2.45    3    65.6    3
       16       7.01    5    2.29    5    67.3    5
       17       7.03    5    2.16    4    69.2    4
       18       7.02    5    2.19    5    68.8    5
       19       7.15    5    2.13    5    70.2    5
       20       7.16    5    2.20    5    69.3    5
       21       7.14    5    2.17    5    69.6    5
       22       7.14    5    2.20    5    69.2    5
       23       7.10    5    2.11    5    70.3    5


    AVERAGE
    FOR THE     7.20   23    1.82   23    74.8   23 HOURS OF MONITORING DATA
      DAY


    ROLLING
     30 DAY     6.76  253    2.51  253   62.8     7 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
    AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                       FEB 27, 1981

          E(IN)   NO.  E(OUT)   NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2   OF    EFF.   OF
          /MMBTU  PTS  /MMBTU   PTS    %     PTS

    0      7.06    5    2.16     5    69.4    5
    1      7.10    5    1.87     5    73.6    5
    2      7.04    5    1.77     5    74.9    5
    3      6.99    5    1.63     5    76.6    5
    4      6.99    5    1.54     5    78.0    5
    5      6.96    5    1.45     5    79.1    5
    6      7.04    5    2.05     5    71.0    5
    7      6.81    4    2.08     4    69.5    4
    8      6.84    5    2.24     5    67.2    5
    9      6.79    4    2.14     4    68.4    4
   10      6.77    5    2.04     5    69.9    5
   11      6.75    5    2.08     5    69.1    5
   12      6.72    5    1.98     5    70.4    5
   13      6.66    5    2.01     5    69.8    5
   14              0             0            0
   15      6.65    3    1.73     3    73.9    3
   16      6.91    3    2.19     3    68.3    3
   17      6.94    5    2.02     5    71.0    5
   18      6.87    5    1.87     5    72.9    5
   19      6.85    5    1.72     5    74.9    5
   20      6.79    4    1.51     4    77.8    4
   21      6.79    5    1.45     5    78.7    5
   22      6.77    5    1.69     5    75.1    5
   23      6.92    5    1.45     5    79.0    5

 AVERAGE
 FOR THE   6.87   23    1.86    23    73.0   23 HOURS OF MONITORING DATA
  DAY

 ROLLING
  30 DAY   6.76  264    2.43   264    64.1    8 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

FEB 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.90	5	1.07	5	84.6	5	
1	7.03	5	0.90	5	87.2	5	
2	7.14	5	0.96	5	86.5	5	
3	7.17	5	0.90	5	87.4	5	
4	7.29	1	0.79	1	89.2	1	
5	S-2 down @ 0400 - low load						
6							
7							
8							
9							
10	7.25	5	1.05	5	85.5	5	S-2 up @ 0930
11	7.20	5	1.27	5	82.4	5	
12	7.17	5	1.20	5	83.3	5	
13	7.16	5	1.16	5	83.8	5	
14	Data acquisition system down						
15	Data acquisition system down						
16	7.32	2	1.14	2	84.5	2	
17	Daily span and zero						
18	7.07	4		0		0	
19	7.07	5		0		0	
20	Outlet SO_2 monitor down						
21							
22							
23							
AVERAGE FOR THE DAY	7.15	12	1.04	10	85.0		9 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.78	265	2.37	264	65.0		8 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 1, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.78	248	2.41	247	64.5	8 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

S-2 down @ 0000 - low load and both modules down 0800 - sludge thickener problems

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.79	230	2.43	229	64.2	8 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

S-2 down - maintenance on dewatering

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0		0		0		0	
1		0		0		0	
2		0		0		0	
3		0		0		0	
4		0		0		0	
5		0		0		0	
6		0		0		0	
7		0		0		0	
8		0		0		0	
9		0		0		0	
10		0		0		0	
11		0		0		0	
12		0		0		0	
13		0		0		0	
14		0		0		0	
15		0		0		0	
16		0		0		0	
17		0		0		0	
18		0		0		0	
19		0		0		0	
20		0		0		0	
21		0		0		0	
22		0		0		0	
23		0		0		0	
AVERAGE FOR THE DAY		0		0			0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.81	208	2.40	208	64.7		7 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

S-2 down - maintenance on dewatering

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                          MAR 4, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS    %     PTS

      0               0            0            0        S-2 down - maintenance on dewatering
      1               0            0            0
      2               0            0            0
      3               0            0            0
      4               0            0            0
      5               0            0            0
      6               0            0            0
      7               0            0            0
      8               0            0            0
      9               0            0            0
     10               0            0            0
     11               0            0            0
     12               0            0            0
     13               0            0            0
     14               0            0            0
     15               0            0            0
     16               0            0            0
     17               0            0            0
     18               0            0            0
     19               0            0            0
     20               0            0            0
     21               0            0            0
     22               0            0            0
     23               0            0            0

  AVERAGE
  FOR THE             0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.85    186  2.40    185   65.0    6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                        SCRUBBER MODULE S-2

                            MAR 5, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1
     2
     3
     4
     5
     6
     7
     8      7.16    4             0            0
     9      7.08    5     2.06    4    71.0    4
    10      7.10    5     2.01    5    71.7    5
    11      7.12    5     1.90    5    73.3    5
    12      6.98    4     1.40    4    80.0    4
    13      7.10    5     1.24    5    82.6    5
    14              0             0            0
    15      6.90    5     1.08    5    84.3    5
    16      6.95    6     1.37    6    80.3    6
    17      6.93    5     1.81    5    73.9    5
    18      6.91    4     1.75    4    74.7    4
    19      6.80    4     1.04    4    84.8    4
    20      6.73    5     0.75    5    88.9    5
    21      6.97    5     0.83    5    88.2    5
    22      6.76    5     0.77    5    88.6    5
    23      6.73    5     0.68    5    90.0    5

 AVERAGE
 FOR THE
   DAY      6.95   15     1.33   14    80.9  14 HOURS OF MONITORING DATA

 ROLLING
  30 DAY
 AVERAGE    6.87  184     2.29  181    66.7   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

S-2 up @ 0820

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.68	5	0.90	5	86.6	5
2	6.65	5	0.60	5	91.0	5
3	6.66	3	0.53	3	92.0	3
4	S-2 down @ 0330 - ruptured seal water line -					
5	Boiler down @ 0645 - ruptured tube					
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	6.66	3	0.68	3	89.9	3 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0

S-2 down - Boiler tube leak

AVERAGE FOR THE DAY 0 0 0 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 8, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0		0		0		0	
1		0		0		0	
2		0		0		0	
3		0		0		0	
4		0		0		0	
5		0		0		0	
6		0		0		0	
7		0		0		0	
8		0		0		0	
9		0		0		0	
10		0		0		0	
11		0		0		0	
12		0		0		0	
13		0		0		0	
14		0		0		0	
15		0		0		0	
16		0		0		0	
17		0		0		0	
18		0		0		0	
19		0		0		0	
20		0		0		0	
21		0		0		0	
22		0		0		0	
23		0		0		0	
AVERAGE FOR THE DAY		0		0			0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.85	161	2.22	158	67.6		5 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Boiler up @ 1030 -
S-2 down - low load

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							
2							
3							
4							
5							
6							
7	6.87	5	1.04	3	84.9	3	
8	6.86	5	2.95	5	57.6	5	
9	6.66	5	1.73	5	74.1	5	
10	6.62	5	1.54	5	76.7	5	
11	6.58	5	1.57	5	76.2	5	
12							
13	6.49	5	1.57	5	75.9	5	
14		0		0		0	
15	6.59	5	1.92	5	70.9	5	
16	6.54	5	1.97	5	69.9	5	
17	6.57	5	1.97	5	70.0	5	
18	6.58	5	1.97	5	70.1	5	
19	6.62	5	1.90	4	71.4	4	
20	6.57	2	1.92	2	70.8	2	
21	6.58	5	1.97	5	70.1	5	
22	6.60	5	1.96	5	70.4	5	
23	6.50	5	1.66	5	74.5	5	
AVERAGE FOR THE DAY	6.62	15	1.84	15	72.2	15 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.82	154	2.10	151	69.2	4 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

S-2 up @ 0650 ↓

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.54	5	1.46	5	77.7	5
1	6.41	5	1.24	5	80.6	5
2	6.39	5	1.34	5	79.1	5
3	6.30	5	1.42	5	77.4	5
4	6.31	5	1.50	5	76.2	5
5	6.46	5	1.58	5	75.5	5
6	6.43	5	1.58	5	75.5	5
7	6.43	5	1.62	5	74.9	5
8	6.59	5	1.76	5	73.3	5
9	6.50	3	1.73	3	73.4	3
10	6.33	5	1.94	5	69.3	5
11	6.23	2	1.70	2	72.8	2
12	Personnel from RTI on-site running audit tests					
13						
14						
15						
16						
17						
18	6.23	5	0.88	5	86.0	5
19	6.21	5	0.99	5	84.1	5
20	6.23	4	1.02	4	83.6	4
21	6.24	5	0.87	5	86.1	5
22	6.28	5	0.86	5	86.3	5
23	6.31	5	0.75	5	88.1	5
AVERAGE FOR THE DAY	6.36	18	1.35	18	78.9	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.75	155	1.93	152	71.4	5 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      MAR 11, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0      6.36     5    0.74    5    88.3    5
     1      6.36     5    0.74    5    88.3    5
     2      6.38     5    0.74    5    88.4    5
     3      6.36     5    0.77    5    87.8    5
     4      6.37     5    0.72    5    88.6    5
     5      6.36     4    0.78    5    87.6    4
     6      6.38     5    0.85    5    86.7    5
     7      6.36     5    0.90    2    85.9    2
     8      6.36     5            0            0
     9      6.37     5    0.80    3    87.4    3
    10      6.33     5    0.71    5    88.8    5
    11      6.36     5    0.71    5    88.8    5
    12      6.32     5    1.00    5    84.1    5
    13      6.43     6    1.67    6    74.0    6
    14               0            0            0
    15      6.33     5    1.67    5    73.7    5
    16      6.28     5    0.53    5    91.5    5
    17      6.31     5    0.57    5    90.9    5
    18      6.33     4    0.60    5    90.6    4
    19      6.32     3    0.55    3    91.3    3
    20      6.59     5    0.57    5    91.3    5
    21      6.60     5    0.65    5    90.1    5
    22      6.60     5    0.65    5    90.1    5
    23      6.63     5    0.85    5    87.2    5

 AVERAGE
 FOR THE    6.40    23    0.81   22    87.3   22 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.72   158    1.65  154    75.4    5 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.74	5	1.13	5	83.2	5
1	6.75	5	1.17	5	82.6	5
2	6.76	5	0.80	5	88.2	5
3	6.72	5	0.71	5	89.4	5
4	6.68	5	0.71	5	89.4	5
5	6.73	5	0.71	5	89.4	5
6	6.75	5	0.68	5	89.9	5
7	6.81	5	0.65	2	90.5	2
8	6.72	4		0		0
9	6.71	5	1.05	3	84.4	3
10	6.69	5	1.03	5	84.6	5
11	6.65	5	0.96	5	85.5	5
12	6.64	5	0.88	5	86.8	5
13	6.64	5	0.78	5	88.2	5
14		0		0		0
15	6.61	3	0.78	3	88.1	3
16						
17	6.48	1	0.46	1	92.9	1
18	6.42	5	0.40	5	93.8	5
19	6.43	5	0.42	5	93.4	5
20	6.50	5	0.40	5	93.9	5
21	6.40	5	0.40	5	93.8	5
22	6.41	5	0.36	5	94.4	5
23	6.51	5	0.46	5	92.9	5
AVERAGE FOR THE DAY	6.62	22	0.71	21	89.1	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.77	162	1.36	157	80.0	5 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          MAR 13, 1981

           E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2   OF    EFF.   OF
          /MMBTU   PTS  /MMBTU   PTS    %     PTS

    0      6.69     5    0.55     5    91.8    5
    1      6.70     5    0.61     5    90.9    5
    2      6.64     5    0.67     5    90.0    5
    3      6.69     5    0.63     5    90.6    5
    4      6.72     5    0.66     5    90.2    5
    5      6.69     5    0.65     5    90.3    5
    6      6.72     5    0.63     5    90.7    5
    7      6.68     5    0.56     2    91.6    2
    8      6.71     5             0             0
    9      6.71     5    0.51     3    92.4    3
   10      6.70     5    0.50     5    92.5    5
   11      6.66     5    0.48     4    92.9    4
   12      6.64     5    0.48     4    92.7    4
   13      6.58     5    0.40     5    93.9    5
   14   Data acquisition system down
   15      6.74     3    0.37     3    94.4    3
   16      6.61     5    0.41     5    93.8    5
   17      6.58     5    0.38     5    94.3    5
   18
   19
   20      6.71     5    0.36     5    94.6    5
   21      6.70     5    0.34     5    94.9    5
   22      6.71     5    0.37     5    94.5    5
   23      6.76     5    0.43     5    93.7    5

 AVERAGE
 FOR THE   6.68    21    0.50    20    92.5  20 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.76   182    1.25   176    81.6   6 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1	Data acquisition system down					
2	6.82	3	0.53	3	92.2	3
3	6.80	5	0.52	5	92.3	5
4	6.78	5	0.58	5	91.4	5
5	6.82	5	0.50	5	92.7	5
6	6.84	2	0.51	2	92.6	2
7						
8	6.85	3		0		0
9	6.82	5	0.40	3	94.1	3
10	6.74	5	0.39	5	94.2	5
11	6.76	5	0.38	5	94.4	5
12	6.75	5	0.36	5	94.7	5
13	6.74	5	0.35	5	94.8	5
14		0		0		0
15	6.70	5	0.32	5	95.3	5
16	6.76	5	0.26	5	96.1	5
17	6.72	5	0.32	5	95.2	5
18	6.73	3	0.35	3	94.8	3
19	6.56	4	0.34	4	94.9	4
20	6.59	3	0.42	3	93.6	3
21	6.63	5	0.44	5	93.3	5
22	6.64	5	0.46	5	93.1	5
23	6.63	5	0.46	5	93.1	5
AVERAGE FOR THE DAY	6.73	20	0.42	19	93.8	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.76	202	1.17	195	82.8	7 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                          MAR 15, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS    %     PTS

        0      6.77    5    0.54    5    92.0    5
        1      6.62    5    0.45    4    93.2    4
        2      6.57    5    0.48    5    92.7    5
        3      6.58    5    0.45    5    93.2    5
        4      6.51    5    0.41    5    93.7    5
        5      6.46    5    0.47    5    92.7    5
        6      6.42    5    0.47    5    92.7    5
        7      6.41    5    0.48    2    92.5    2
        8      6.40    5            0            0
        9      6.57    5    0.45    3    93.1    3
       10      6.66    5    0.60    5    90.9    5
       11      6.75    5    0.63    5    90.7    5
       12      6.72    5    0.66    5    90.2    5
       13      6.65    5    0.59    5    91.2    5
       14              0            0            0
       15      6.68    5    0.61    5    90.8    5
       16      6.70    5    0.50    5    92.5    5
       17      6.86    3    0.39    3    94.3    3
       18      6.80    5    0.41    5    94.0    5
       19      6.86    3    0.44    3    93.6    3
       20      7.03    4    0.34    4    95.1    4
       21      7.09    5    0.31    5    95.7    5
       22      7.12    5    0.30    5    95.8    5
       23      7.15    5    0.29  [illegible]  95.9    5


   AVERAGE
   FOR THE     6.71   23    0.47   22    93.0   22 HOURS OF MONITORING DATA
     DAY


   ROLLING
    30 DAY     6.76  225    1.09  217    83.8    8 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          MAR 16, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC. NO.
  HOUR     LB.SO2  OF   LB.SO2  OF   EFF.  OF
           /MMBTU  PTS  /MMBTU PTS    %    PTS

    0       7.37    1    0.27   1    96.3   1
    1
    2       7.17    6    0.43   6    94.0   6
    3       7.18    5    0.46   5    93.6   5
    4       7.20    5    0.45   5    93.7   5
    5       7.14    4    0.50   4    93.0   4
    6       7.15    5    0.39   4    94.5   4
    7       7.13    5    0.46   2    93.5   2
    8       7.12    4           0           0
    9       7.19    6    1.76   3    75.3   3
   10       7.12    5    1.53   5    78.5   5
   11       7.06    5    1.21   5    82.9   5
   12       7.00    5    1.39   5    80.2   5
   13       7.02    5    1.48   5    79.0   5
   14               0           0           0
   15       7.04    5    0.62   5    91.2   5
   16       7.04    5    0.82   5    88.3   5
   17       7.07    5    0.74   5    89.5   5
   18       7.03    2    0.58   2    91.7   2
   19       6.99    4    0.59   4    91.5   4
   20       6.98    4    0.40   4    94.2   4
   21       7.12    5    0.27   5    96.3   5
   22       6.94    5    0.27   5    96.1   5
   23       6.89    5    0.32   5    95.4   5

 AVERAGE
 FOR THE    7.09   22    0.71  21    89.6  20 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.79  247    1.06 238    84.4   9 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.75	3	0.54	3	91.9	3
2	6.79	5	0.53	5	92.2	5
3	6.84	5	0.63	5	90.8	5
4	6.89	5	0.45	5	93.5	5
5	6.71	5	0.44	5	93.4	5
6	6.75	5	0.50	5	92.5	5
7	6.72	5	0.64	1	90.5	1
8	6.72	5		0		0
9	6.74	5	0.38	4	94.3	4
10	6.64	5	0.37	5	94.4	5
11	6.61	5	0.64	5	90.4	5
12	6.65	5	0.76	5	88.6	5
13	6.62	5	0.32	5	95.2	5
14		0		0		0
15	6.64	5	0.30	5	95.5	5
16	6.63	5	0.36	5	94.5	5
17	6.61	5	0.39	5	94.1	5
18	6.62	5	0.36	5	94.5	5
19	6.65	3	0.31	3	95.4	3
20	6.50	4	0.70	4	89.2	4
21	6.59	5	1.33	5	79.8	5
22	6.61	5	1.15	5	82.6	5
23	6.69	5	1.08	5	83.9	5
AVERAGE FOR THE DAY	6.68	22	0.58	21	91.3	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.78	269	1.02	259	84.9	10 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 18, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.58	5	0.91	5	86.2	5
1	6.62	5	0.66	5	90.1	5
2	6.67	5	0.58	5	91.3	5
3	6.73	5	0.74	5	89.0	5
4	6.71	5	0.78	5	88.4	5
5	6.74	5	0.39	5	94.2	5
6	6.77	5	0.21	5	96.9	5
7	6.84	5	0.18	2	97.4	2
8	6.75	5		0		0
9	6.78	5	0.11	3	98.4	3
10	6.77	5	0.16	5	97.7	5
11	6.76	5	0.17	5	97.5	5
12	6.75	5	0.16	5	97.6	5
13	6.76	5	0.16	5	97.6	5
14		0		0		0
15	6.74	5	0.39	5	94.2	5
16	6.73	5	0.34	5	95.0	5
17	6.77	5	0.34	4	94.9	4
18	6.78	5	0.32	5	95.3	5
19	6.78	5	0.26	5	96.2	5
20	6.80	5	0.31	5	95.4	5
21	6.82	2	0.31	2	95.5	2
22	6.88	5	0.31	5	95.5	5
23	6.88	5	0.32	5	95.4	5
AVERAGE FOR THE DAY	6.76	23	0.37	22	94.5	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.78	292	0.97	281	85.7	11 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 19, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.88	5	0.30	5	95.6	5	
1	6.89	5	0.38	5	94.6	5	
2	6.92	5	0.41	5	94.1	5	
3	6.92	5	0.39	5	94.3	5	
4	6.90	5	0.39	5	94.4	5	
5	6.90	1	0.34	1	95.0	1	
6	6.93	5	0.37	5	94.7	5	
7	6.96	5	0.34	2	95.2	2	
8	7.00	5		0		0	
9	6.98	5	0.32	3	95.3	3	
10	6.97	5	0.32	5	95.4	5	
11	6.99	5	0.30	5	95.7	5	
12	7.01	4	0.25	4	96.5	4	
13	6.94	5	0.21	5	96.9	5	
14		0		0		0	
15	6.93	5	0.20	5	97.2	5	
16	6.96	5	0.20	5	97.1	5	
17	7.06	5	0.21	5	97.0	5	
18	7.10	5	0.22	5	96.8	5	
19	7.15	2	0.22	2	96.9	2	
20	6.91	4	0.25	4	96.4	4	
21	6.87	5	0.20	5	97.2	5	
22	6.91	5	0.21	5	97.0	5	
23	7.07	5	0.26	5	96.3	5	
AVERAGE FOR THE DAY	6.96	23	0.29	22	95.9	21 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.79	315	0.92	303	86.4	12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 20, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	7.10	5	0.42	5	94.1	5
1	7.15	5	0.49	5	93.2	5
2	7.23	5	0.50	5	93.1	5
3	7.28	5	0.52	5	92.8	5
4	7.27	5	0.57	5	92.2	5
5	7.30	5	0.59	5	91.9	5
6	7.27	5	0.50	5	93.1	5
7						
8	7.30	5		0		0
9	7.39	5	0.88	4	88.1	4
10	7.44	5	1.07	5	85.6	5
11	7.37	5	1.18	5	84.0	5
12	7.42	5	0.51	5	93.1	5
13	7.43	5	0.52	4	93.0	4
14		0		0		0
15	7.64	5	0.52	5	93.1	5
16	7.42	5	0.69	5	90.7	5
17	7.65	5	0.66	5	91.4	5
18	Data acquisition system down					
19	Data acquisition system down					
20	Daily span and zero					
21	7.26	2	0.97	2	86.6	2
22	7.35	5	0.67	5	90.9	5
23	7.36	5	0.67	5	90.9	5
AVERAGE FOR THE DAY	7.35	19	0.66	18	91.0	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.82	334	0.91	321	86.7	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 21, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	7.43	5	0.54	5	92.8	5
2	7.60	5	0.61	5	92.1	5
3	7.38	5	0.55	5	92.5	5
4	7.41	5	0.52	5	93.0	5
5	7.36	5	0.55	5	92.6	5
6	7.35	5	0.54	5	92.7	5
7	7.34	5	0.61	2	91.7	2
8	7.34	5		0		0
9	7.33	5	0.54	3	92.6	3
10	7.33	5	0.49	5	93.4	5
11	7.31	5		0		0
12	7.30	5	0.55	5	92.5	5
13	7.28	5	0.57	5	92.2	5
14		0		0		0
15	7.34	5	0.53	5	92.7	5
16	7.41	4	0.55	4	92.6	4
17	7.16	3	0.58	3	91.9	3
18	7.18	2	0.56	1	92.3	1
19						
20	7.29	5	0.78	5	89.3	5
21	7.23	5	0.73	5	89.9	5
22	7.18	5	0.58	5	91.9	5
23	7.39	5	0.57	5	92.4	5
AVERAGE FOR THE DAY	7.33	21	0.57	19	92.2	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.85	355	0.89	340	87.0	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.97	5	0.53	5	92.4	5
2	7.00	5	0.53	5	92.4	5
3	6.97	5	0.57	5	91.8	5
4	6.99	5	0.54	5	92.3	5
5	7.01	5	0.55	5	92.1	5
6	7.04	5	0.55	5	92.2	5
7	7.07	5	0.52	5	92.6	5
8	7.08	5	0.55	5	92.3	5
9	7.11	5	0.57	5	92.0	5
10	7.13	5	0.53	5	92.6	5
11						
12	7.13	5	0.99	5	86.1	5
13	7.20	5	1.03	5	85.7	5
14		0		0		0
15						
16	7.18	6	0.50	6	93.0	6
17	7.08	5	0.56	5	92.0	5
18	6.95	3	0.55	3	92.1	3
19	Data acquisition system down					
20		↓				
21						
22	6.88	2	0.54	2	92.2	2
23	6.85	5	0.57	5	91.6	5
AVERAGE FOR THE DAY	7.04	17	0.60	17	91.5	17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.86	372	0.87	357	87.3	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.81	5	0.65	5	90.5	5
1	6.78	5	0.62	5	90.9	5
2	6.85	5	0.56	5	91.8	5
3	6.88	5	0.61	5	91.1	5
4	6.89	5	0.61	5	91.2	5
5	6.84	5	0.43	5	93.8	5
6	6.83	5	0.39	5	94.4	5
7	6.79	5	0.45	2	93.4	2
8	6.81	5		0		0
9	6.74	5	0.41	3	94.0	3
10	6.72	5	0.40	5	94.0	5
11	6.71	5	0.28	5	95.8	5
12	6.72	5	0.25	5	96.3	5
13	6.70	5	0.33	5	95.1	5
14		0		0		0
15	6.68	5	0.27	5	95.9	5
16	6.65	5	0.23	5	96.5	5
17	6.66	5	0.28	5	95.8	5
18	6.71	5	0.46	5	93.1	5
19	6.68	5	0.50	5	92.6	5
20	6.71	3	0.40	3	94.0	3
21	6.73	5	0.33	5	95.1	5
22	6.68	5	0.29	5	95.6	5
23	6.76	5	0.26	5	96.1	5
AVERAGE FOR THE DAY	6.75	23	0.41	22	93.9	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.85	395	0.85	379	87.6	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                           MAR 24, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU   PTS  /MMBTU  PTS    %     PTS

      0
      1      6.77     5    0.41    5    93.9    5
      2      6.76     5    0.45    5    93.3    5
      3      6.77     5    0.44    5    93.5    5
      4      6.81     5    0.50    5    92.6    5
      5      6.86     5    0.43    5    93.7    5
      6      6.83     5    0.45    5    93.3    5
      7      6.83     5    0.40    1    94.1    1
      8      6.83     5            0            0
      9      6.76     5    0.42    4    93.7    4
     10      6.73     5    0.45    5    93.3    5
     11      6.72     5    0.39    5    94.1    5
     12      6.70     5    0.33    5    95.1    5
     13      6.69     2    0.31    2    95.3    2
     14               0            0            0
     15      6.72     6    0.40    6    94.0    6
     16      6.77     5    0.43    5    93.6    5
     17      6.78     4    0.52    4    92.4    4
     18      6.81     5    0.47    5    93.2    5
     19  Daily span and zero
     20  Daily span and zero
     21      6.94     2    0.59    2    91.5    2
     22      6.90     5    0.71    5    89.7    5
     23      6.91     5    0.75    5    89.1    5

  AVERAGE
  FOR THE    6.79    20    0.47   19    93.1  18 HOURS OF MONITORING DATA
   DAY

  ROLLING
   30 DAY    6.85   415    0.83  398    87.9  16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.87	5	0.74	5	89.2	5
1	6.92	5	0.74	5	89.4	5
2	6.97	5	1.64	5	76.5	5
3	6.91	5	1.98	4	71.4	4
4	6.88	5		0		0
5	6.88	5		0		0
6	6.89	5		0		0
7	6.87	5	0.50	1	92.8	1
8	6.83	5		0		0
9	6.87	6	0.71	4	89.7	4
10	6.84	5	0.60	5	91.2	5
11	6.84	4	0.60	4	91.2	4
12	6.83	5	0.67	5	90.2	5
13	6.84	5	0.64	5	90.7	5
14		0		0		0
15	6.79	5	0.55	5	92.0	5
16	6.83	5	0.50	5	92.7	5
17	6.81	5	0.50	5	92.7	5
18	6.83	2	0.48	2	92.9	2
19						
20	6.76	3	0.57	3	91.6	3
21	6.76	5	0.55	5	91.8	5
22	6.76	5	0.50	5	92.7	5
23	6.77	5	0.55	5	91.9	5
AVERAGE FOR THE DAY	6.84	22	0.72	18	89.3	17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.85	437	0.82	416	88.0	16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 26, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.72	5	0.54	5	91.9	5
1	6.75	5	0.59	5	91.2	5
2	6.74	5	0.51	5	92.4	5
3	6.69	5	0.54	5	91.9	5
4	6.73	5	0.58	5	91.4	5
5	6.67	5	0.61	5	90.8	5
6	6.70	5	0.67	5	89.9	5
7	6.71	5	0.59	2	91.3	2
8	6.71	5		0		0
9	6.68	1		0		0
10	6.69	4	0.35	4	94.8	4
11	6.70	5	0.46	5	93.2	5
12	6.69	4	0.40	4	94.0	4
13	6.66	5	0.24	5	96.4	5
14		0		0		0
15	6.60	5	0.32	5	95.1	5
16	6.72	2	0.25	6	95.4	2
17	6.66	4	0.26	4	96.1	4
18	6.60	5	0.28	5	95.8	5
19	6.58	5	0.26	5	96.1	5
20	6.62	5	0.26	5	96.0	5
21	6.61	5	0.28	5	95.7	5
22	6.61	5	0.30	5	95.4	5
23	6.57	5	0.31	5	95.3	5
AVERAGE FOR THE DAY	6.67	23	0.41	21	93.8	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.84	460	0.80	437	88.2	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                         MAR 27, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
              /MMBTU   PTS  /MMBTU  PTS    %     PTS

        0
        1
        2      6.59     5    0.56    5    91.6    5
        3      6.47     5    0.46    5    92.9    5
        4      6.49     5    0.45    5    93.1    5
        5      6.42     5    0.31    5    95.3    5
        6      6.42     5    0.29    5    95.4    5
        7      6.40     5    0.26    1    95.9    1
        8      6.43     5            0            0
        9      6.43     5    0.28    4    95.7    4
       10      6.41     5    0.26    5    96.0    5
       11      6.40     5    0.30    5    95.3    5
       12      6.41     5    0.29    5    95.5    5
       13      6.41     5    0.26    5    95.9    5
       14               0            0            0
       15      6.41     5    0.35    5    94.6    5
       16      6.40     5    0.31    5    95.1    5
       17      6.44     5    0.66    5    89.8    5
       18      6.40     2    0.76    2    88.1    2
       19      6.47     3    0.47    3    92.8    3
       20      6.46     5    0.41    5    93.7    5
       21      6.44     5    0.36    5    94.4    5
       22      6.45     5    0.38    5    94.1    5
       23      6.80     5    0.61    5    91.1    5

     AVERAGE
     FOR THE   6.45    21    0.40   20    93.7  19 HOURS OF MONITORING DATA
       DAY

     ROLLING
      30 DAY   6.82   481    0.79  457    88.5  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
     AVERAGE
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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     MAR 28, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS     %     PTS

   0      6.55    3    0.53    3    91.8    3
   1      6.65    5    0.55    5    91.8    5
   2      6.67    5    0.53    5    92.1    5
   3      6.65    5    0.55    5    91.8    5
   4      6.71    5    0.54    5    92.0    5
   5      6.73    5    0.57    5    91.6    5
   6      6.65    5    0.56    5    91.6    5
   7      6.74    5    0.62    2    90.8    2
   8      6.72    5            0            0
   9      6.66    5    0.54    3    91.7    3
  10      6.52    5    0.38    5    94.1    5
  11      6.48    5    0.30    5    95.3    5
  12      6.51    5    0.35    5    94.7    5
  13      6.49    5    0.36    5    94.4    5
  14              0            0            0
  15      6.47    5    0.41    5    93.6    5
  16      6.46    5    0.30    5    95.4    5
  17      6.44    2    0.30    2    95.4    2
  18      6.48    5    0.24    5    96.2    5
  19      6.47    5    0.25    5    96.1    5
  20      6.46    5    0.24    5    96.3    5
  21      6.44    5    0.25    5    96.2    5
  22      6.47    5    0.29    5    95.5    5
  23      6.48    5    0.37    5    94.3    5

AVERAGE
FOR THE
  DAY     6.56   23    0.41   22    93.8  22 HOURS OF MONITORING DATA


ROLLING
 30 DAY
AVERAGE   6.81  504    0.77  479    88.7  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 29, 1981

Relay switch in control unit of SO_2 monitor out of service

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14		0		0		0
15	6.58	5	0.48	5	92.6	5
16	6.51	5	0.60	5	90.8	5
17	6.53	5	0.53	5	91.9	5
18	6.64	2	0.49	2	92.7	2
19	6.69	5	0.40	5	94.0	5
20	6.74	5	0.42	5	93.7	5
21	6.72	5	0.38	5	94.3	5
22	6.74	5	0.38	5	94.4	5
23	6.74	5	0.46	5	93.1	5
AVERAGE FOR THE DAY	6.65	9	0.46	9	93.1	9 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.80	503	0.76	478	88.9	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Fixed @ 1400

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                        MAR 30, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR      LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0        6.85    4    0.74    4    89.1    4
    1        6.85    5    0.80    5    88.4    5
    2        6.84    5    0.76    5    88.8    5
    3        6.83    5    0.84    5    87.7    5
    4        6.84    5    0.87    5    87.3    5
    5        6.83    5    0.54    5    92.0    5
    6        6.82    5    0.42    5    93.8    5
    7        6.81    5    0.38    5    94.5    5
    8        6.82    5    0.37    5    94.5    5
    9        6.76    5    0.37    5    94.6    5
   10        6.75    5    0.32    5    95.2    5
   11        6.78    5    0.29    5    95.7    5
   12        6.76    4    0.32    4    95.3    4
   13        6.76    5    0.37    5    94.5    5
   14                 0            0            0
   15        6.86    5    0.46    5    93.3    5
   16        6.85    5    0.47    5    93.2    5
   17        6.88    1    0.48    1    93.0    1
   18     Data acquisition system down -
   19     SO2 monitor control unit down
   20                  |
   21                  |
   22                  |
   23                  v


 AVERAGE
 FOR THE     6.82   17    0.52   17    92.4   16 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY     6.79  497    0.70  472    89.7   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAR 31, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0		0		0
1		0		0		0
2		0		0		0
3		0		0		0
4		0		0		0
5		0		0		0
6		0		0		0
7		0		0		0
8		0		0		0
9		0		0		0
10		0		0		0
11		0		0		0
12		0		0		0
13		0		0		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0		0		0
19		0		0		0
20		0		0		0
21		0		0		0
22		0		0		0
23		0		0		0
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.78	474	0.64	449	90.6	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Data acquisiton system down

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                        APR 1, 1981

           E(IN)    NO.  E(OUT)   NO.   REDUC.  NO.
  HOUR    LB.SO2    OF   LB.SO2   OF     EFF.   OF
          /MMBTU   PTS   /MMBTU   PTS     %     PTS

    0               0              0              0
    1               0              0              0     Data acquisiton system down
    2               0              0              0
    3               0              0              0
    4               0              0              0
    5               0              0              0
    6               0              0              0
    7               0              0              0
    8               0              0              0
    9               0              0              0
   10               0              0              0
   11               0              0              0
   12               0              0              0
   13               0              0              0
   14               0              0              0
   15               0              0              0
   16               0              0              0     Boiler down @ 1515 - tube leak
   17               0              0              0
   18               0              0              0
   19               0              0              0
   20               0              0              0
   21               0              0              0
   22               0              0              0
   23               0              0              0     Boiler up @ 2200
                                                       Boiler up @ 2200

 AVERAGE
 FOR THE            0              0              0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY
 AVERAGE   6.77    462   0.63     439    90.7   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                        APR 2, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0               0            0            0
     1               0            0            0
     2               0            0            0
     3               0            0            0
     4               0            0            0
     5               0            0            0
     6               0            0            0
     7               0            0            0
     8               0            0            0
     9               0            0            0
    10               0            0            0
    11               0            0            0
    12               0            0            0
    13               0            0            0
    14               0            0            0
    15               0            0            0
    16               0            0            0
    17      6.71     1    0.28    1    95.8    1
    18               0            0            0
    19               0            0            0
    20               0            0            0
    21               0            0            0
    22               0            0            0
    23               0            0            0

  AVERAGE
  FOR THE   6.71     1    0.28    1            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   6.77   463    0.63  440    90.7   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Data acquisition system down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6						
7	6.66	1	0.46	1	93.0	1
8						
9						
10						
11						
12						
13						
14						
15	6.36	4	0.17	4	97.3	4
16	6.32	4	0.19	4	96.9	4
17	6.20	2	0.20	2	96.9	2
18	6.31	5	0.17	4	97.3	4
19	6.31	5	0.16	5	97.5	5
20	6.24	5	0.17	5	97.2	5
21	6.23	5	0.18	5	97.1	5
22	6.19	5	0.17	5	97.3	5
23	6.17	5	0.17	5	97.3	5
AVERAGE FOR THE DAY	6.30	10	0.20	10	97.2	9 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.76	473	0.62	450	90.9	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Data acquisition system up @ 1400 ↓

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                    ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-2

                         APR 4, 1981

             E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
  HOUR      LB.SO2    OF   LB.SO2   OF    EFF.   OF
            /MMBTU    PTS  /MMBTU   PTS    %     PTS

    0        6.41     4     0.17     4    97.4    4
    1        6.39     4     0.21     4    96.7    4
    2        6.42     5     0.36     5    94.4    5
    3        6.42     5     0.37     5    94.3    5
    4        6.35     5     0.31     5    95.1    5
    5        6.35     5     0.27     5    95.8    5
    6        6.24     5     0.31     5    95.1    5
    7        6.24     5     0.30     1    95.1    1
    8        6.20     5              0            0
    9        6.24     5     0.31     4    95.1    4
   10        6.24     5     0.28     5    95.4    5
   11        6.28     5     0.24     5    96.2    5
   12        6.17     5     0.32     5    94.9    5
   13        6.22     5     0.34     5    94.6    5
   14                 0              0            0
   15        6.31     5     0.31     5    95.1    5
   16        6.32     3     0.26     2    95.9    2
   17        6.24     2     0.25     1    96.0    1
   18        6.43     6     0.39     6    94.0    6
   19        6.67     5     0.38     5    94.3    5
   20        6.65     5     0.38     5    94.3    5
   21        6.63     5     0.32     5    95.2    5
   22        6.61     5     0.32     5    95.1    5
   23        6.61     5     0.29     5    95.5    5

 AVERAGE
 FOR THE     6.38    23     0.30    22    95.2   20 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     6.74   496     0.60   472    91.1   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.60	5	0.33	5	95.0	5
1	6.56	5	0.39	5	94.1	5
2	6.53	5	0.44	5	93.2	5
3	6.49	5	0.42	5	93.5	5
4	6.48	5	0.41	5	93.7	5
5	6.48	5	0.39	5	94.0	5
6	6.48	5	0.43	5	93.4	5
7	6.48	5	0.43	2	93.4	2
8	6.59	5		0		0
9	6.64	5	0.39	3	94.1	3
10	6.76	5	0.49	5	92.8	5
11	6.72	5	0.46	5	93.2	5
12	6.69	5	0.47	5	93.0	5
13	6.63	5	0.45	5	93.3	5
14		0		0		0
15	6.64	5	0.49	5	92.7	5
16	6.60	5	0.47	5	92.8	5
17	6.50	4	0.45	4	93.1	4
18						
19	6.44	3	0.40	3	93.8	3
20	6.39	5	0.39	5	93.9	5
21	6.37	5	0.38	5	94.1	5
22	6.41	5	0.37	5	94.2	5
23	6.42	5	0.38	5	94.0	5
AVERAGE FOR THE DAY	6.54	22	0.42	21	93.6	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.74	518	0.59	493	91.2	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1	Data acquisition system down					
2	6.42	3	0.35	3	94.5	3
3	6.43	5	0.34	5	94.8	5
4	6.55	5	0.30	5	95.4	5
5	6.37	5	0.26	5	95.9	5
6	6.36	5	0.22	5	96.5	5
7	6.24	5	0.17	1	97.3	1
8	6.27	5		0		0
9	6.19	5	0.09	4	98.5	4
10	6.13	5	0.10	5	98.4	5
11	6.13	5	0.11	5	98.3	5
12	6.08	5	0.12	5	98.1	5
13	6.13	5	0.10	5	98.4	5
14		0		0		0
15	6.12	5	0.08	5	98.7	5
16	6.05	4	0.13	3	97.8	3
17	6.11	4	0.16	3	97.4	3
18	6.27	5	0.10	5	98.4	5
19	6.24	5	0.12	5	98.1	5
20	6.29	5	0.11	5	98.2	5
21	6.24	5	0.11	5	98.2	5
22	6.24	5	0.13	5	97.8	5
23	6.33	5	0.15	5	97.7	5
AVERAGE FOR THE DAY	6.25	21	0.16	20	97.4	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.71	524	0.56	499	91.7	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.59	4	0.14	4	97.9	4
1	6.59	5	0.20	5	97.0	5
2	6.73	5	0.22	5	96.8	5
3	6.75	5	0.26	5	96.1	5
4	6.75	5	0.33	5	95.1	5
5	6.78	5	0.34	5	95.0	5
6	6.73	5	0.34	5	95.0	5
7	6.67	5	0.15	5	97.7	5
8	6.70	4	0.14	4	97.9	4
9	6.69	1	0.17	1	97.4	1
10	6.51	4	0.21	3	96.9	3
11	Data aquisition system down					
12	Data acquisition system down					
13	6.54	5	0.11	5	98.3	5
14		0		0		0
15	6.59	3	0.13	3	98.1	3
16	6.65	4	0.13	4	98.0	4
17	6.67	4	0.12	4	98.2	4
18	Data acquisition system down					
19	Data acquisition system down					
20	6.72	6	0.13	6	98.1	6
21	6.71	5	0.14	5	98.0	5
22	6.68	5	0.13	5	98.0	5
23	6.67	5	0.24	5	96.3	5
AVERAGE FOR THE DAY	6.67	19	0.19	19	97.1	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.71	543	0.54	518	91.9	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 8, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.85	5	0.27	5	96.0	5
1	6.80	5	0.36	5	94.7	5
2	6.74	5	0.43	5	93.7	5
3	6.71	5	0.41	5	93.9	5
4	6.70	5	0.42	5	93.7	5
5	6.70	5	0.42	5	93.7	5
6	6.71	5	0.33	5	95.1	5
7	6.70	5	0.26	1	96.1	1
8	6.62	5		0		0
9	6.59	5	0.21	4	96.8	4
10	6.53	1	0.11	1	98.3	1
11	6.44	2	0.23	2	96.4	2
12	6.51	5	0.16	5	97.6	5
13	6.54	5	0.13	5	98.0	5
14		0		0		0
15	6.55	5	0.13	5	98.0	5
16	6.55	5	0.10	5	98.5	5
17	6.55	5	0.10	5	98.5	5
18	6.57	4	0.08	4	98.8	4
19	6.60	5	0.10	5	98.5	5
20	6.57	5	0.09	5	98.6	5
21	6.64	5	0.08	5	98.8	5
22	6.63	5	0.10	5	98.5	5
23	6.67	5	0.15	5	97.7	5
AVERAGE FOR THE DAY	6.63	23	0.21	22	96.8	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.71	551	0.49	525	92.7	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.70	5	0.20	5	97.0	5	
1	6.70	5	0.21	5	96.8	5	
2	6.70	5	0.20	5	97.0	5	
3	6.70	5	0.19	5	97.1	5	
4	6.70	5	0.22	5	96.8	5	
5	6.62	5	0.21	5	96.8	5	
6	6.67	5	0.22	5	96.7	5	
7	6.65	5	0.27	2	96.0	2	
8	6.70	5		0		0	
9	6.37	1	0.15	4		0	
10		0	0.10	2		0	
11	Factory representative on-site working on O_2 monitors						
12							
13							
14							
15							
16							
17							
18		0	0.15	1		0	
19		0	0.18	5		0	
20							
21	6.33	2	0.17	2	97.4	2	
22	6.35	5	0.12	5	98.2	5	
23	6.34	5	0.10	5	98.4	5	
AVERAGE FOR THE DAY	6.58	13	0.18	15	97.1		11 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.72	546	0.45	522	93.2		21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.28	2	0.14	2	97.7	2
1	6.25	5	0.19	5	96.9	5
2	6.29	5	0.24	5	96.2	5
3	6.30	5	0.26	5	95.9	5
4	6.39	5	0.21	5	96.7	5
5	6.31	5	0.17	5	97.2	5
6	6.25	5	0.16	5	97.5	5
7	6.25	5	0.15	1	97.5	1
8	6.26	5		0		0
9	6.27	5	0.13	4	98.0	4
10	6.18	4	0.14	4	97.7	4
11	6.35	4	0.16	4	97.5	4
12	6.22	5	0.13	5	97.9	5
13	6.22	5	0.14	5	97.8	5
14		0		0		0
15	6.24	5	0.23	5	96.3	5
16	6.23	5	0.15	5	97.6	5
17	6.23	5	0.13	5	97.9	5
18	6.24	5	0.13	5	98.0	5
19	6.30	5	0.13	5	98.0	5
20	6.28	5	0.14	5	97.8	5
21	6.30	5	0.15	5	97.6	5
22	6.30	5	0.16	5	97.5	5
23	6.36	5	0.16	5	97.5	5
AVERAGE FOR THE DAY	6.27	23	0.16	22	97.4	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.71	546	0.43	522	93.6	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.56	5	0.26	5	96.1	5	
1	6.40	5	0.24	5	96.2	5	
2	6.43	5	0.22	5	96.7	5	
3	6.32	5	0.24	5	96.2	5	
4	6.28	5	0.27	5	95.7	5	
5	6.25	5	0.25	5	95.9	5	
6	6.28	5	0.23	5	96.4	5	
7	6.27	5	0.19	2	96.9	2	
8	6.26	5		0		0	
9	6.27	5	0.20	3	96.8	3	
10	6.41	5	0.20	5	96.9	5	
11	6.29	5	0.19	5	96.9	5	
12	6.29	5	0.21	5	96.7	5	
13	6.31	5	0.22	5	96.6	5	
14	SO_2 stratification check						
15	SO_2 stratification check						
16	6.44	3	0.24	3	96.3	3	
17	6.45	5	0.20	5	97.0	5	
18	6.45	5	0.18	5	97.2	5	
19	6.47	5	0.18	5	97.2	5	
20	6.44	5	0.19	5	97.1	5	
21	6.43	5	0.19	5	97.1	5	
22	6.47	5	0.18	5	97.2	5	
23	6.53	5	0.24	5	96.3	5	
AVERAGE FOR THE DAY	6.38	22	0.21	21	96.6	21	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.70	546	0.41	522	93.9	21	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.48	5	0.27	5	95.8	5	
1	6.50	5	0.30	5	95.4	5	
2	6.47	5	0.30	5	95.3	5	
3	6.49	5	0.29	5	95.6	5	
4	6.59	5	0.31	5	95.3	5	
5	6.53	5	0.31	5	95.2	5	
6	6.47	5	0.33	5	94.9	5	
7							
8	6.40	5		0		0	
9	6.47	5	0.29	3	95.5	3	
10	6.47	5	0.27	5	95.9	5	
11	6.49	5	0.21	5	96.8	5	
12	6.46	5	0.24	5	96.2	5	
13	6.46	5	0.24	5	96.2	5	
14		0		0		0	
15	6.47	5	0.26	5	95.9	5	
16	6.50	5	0.27	5	95.9	5	
17	6.44	1	0.26	1	96.0	1	
18	6.48	4	0.34	4	94.8	4	
19	6.50	5	0.29	5	95.5	5	
20	6.45	5	0.32	5	95.1	5	
21	6.52	5	0.31	5	95.3	5	
22	6.59	5	0.26	5	96.0	5	
23	6.62	5	0.24	5	96.4	5	
AVERAGE FOR THE DAY	6.49	22	0.28	21	95.7		20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.69	547	0.40	523	94.1		21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 13, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.74	3	0.26	3	96.1	3
2	6.72	5	0.26	5	96.1	5
3	6.68	5	0.25	5	96.2	5
4	6.69	5	0.24	5	96.4	5
5	6.66	5	0.27	5	96.0	5
6	6.56	5	0.31	5	95.3	5
7	6.49	5	0.37	2	94.5	2
8	6.36	5		0		0
9	6.30	5	0.16	3	97.5	3
10	6.37	5	0.23	5	96.5	5
11	6.30	5	0.20	5	96.8	5
12	6.32	5	0.19	5	96.9	5
13	6.37	5	0.19	5	97.0	5
14		0		0		0
15	6.36	5	0.31	5	95.2	5
16	6.31	5	0.48	5	92.4	5
17	6.29	3	0.57	3	91.0	3
18	6.24	3	0.39	3	93.8	3
19	6.30	5	0.32	5	95.0	5
20	6.30	5	0.42	5	93.3	5
21	6.29	5	0.40	5	93.7	5
22	6.28	5	0.58	5	90.7	5
23	6.28	5	0.37	5	94.0	5
AVERAGE FOR THE DAY	6.42	22	0.32	21	95.0	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.68	549	0.39	525	94.1	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.16	4	0.33	4	94.6	4
1	6.26	5	0.33	5	94.7	5
2	6.39	5	0.50	5	92.1	5
3	6.42	5	0.67	5	89.5	5
4	6.57	5	0.87	5	86.7	5
5	6.55	5	1.00	5	84.7	5
6	6.58	5	1.08	5	83.5	5
7	6.61	5	0.93	2	85.9	2
8	6.62	5		0		0
9	6.68	5	0.30	3	95.5	3
10	6.69	4	0.30	4	95.6	4
11	6.68	5	0.31	5	95.4	5
12	6.67	5	0.29	5	95.7	5
13	6.65	5	0.45	5	93.3	5
14		0		0		0
15	6.66	5	0.62	5	90.6	5
16	6.70	5	0.68	5	89.8	5
17						
18		0	0.27	1		0
19	6.30	3	0.24	3	96.1	3
20	6.43	5	0.28	5	95.7	5
21	6.40	5	0.31	5	95.2	5
22	6.35	5	0.22	5	96.5	5
23	6.34	5	0.24	5	96.2	5
AVERAGE FOR THE DAY	6.51	21	0.49	21	92.4	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.67	547	0.40	524	94.1	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 15, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.33	5	0.26	5	95.9	5
1	6.35	5	0.29	5	95.5	5
2	6.22	5	0.30	5	95.2	5
3	6.20	5	0.30	5	95.2	5
4	6.16	5	0.28	5	95.5	5
5	6.17	5	0.26	5	95.8	5
6	6.23	5	0.27	5	95.7	5
7	6.30	5	0.20	2	96.8	2
8	6.29	5		0		0
9	6.23	5	0.20	3	96.8	3
10	6.19	5	0.18	5	97.1	5
11	6.28	2	0.21	2	96.7	2
12	6.26	2	0.19	2	97.0	2
13	S-2 down @ 1230 - boiler down due to plant power outage					
14						
15						
16						
17	6.41	2	0.26	2	95.9	2
18	6.47	4	0.24	4	96.3	4
19	6.46	5	0.19	5	97.1	5
20	6.43	5	0.17	5	97.4	5
21	6.41	5	0.17	5	97.3	5
22	6.38	5	0.20	5	96.9	5
23	6.43	5	0.26	5	96.0	5
AVERAGE FOR THE DAY	6.31	20	0.23	19	96.3	19 HOURS OF MONITORING DATA

S-2 up @ 1725

ROLLING 30 DAY AVERAGE NOT APPLICABLE, BOILER DID NOT OPERATE FOR THE ENTIRE 24 HOURS

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 16, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.47	5	0.22	5	96.6	5
1	6.45	5	0.23	5	96.5	5
2	6.53	5	0.26	5	96.1	5
3	6.46	5	0.25	5	96.2	5
4	6.43	5	0.27	5	95.8	5
5	6.48	5	0.23	5	96.4	5
6	6.49	2	0.23	2	96.4	2
7						
8	6.46	3		0		0
9	6.44	5	0.23	3	96.4	3
10	6.36	5	0.25	5	96.0	5
11	6.34	5	0.33	5	94.8	5
12	6.33	5	0.29	5	95.5	5
13	6.33	5	0.25	4	96.1	4
14		0		0		0
15	6.42	3	0.28	3	95.6	3
16	6.36	5	0.22	5	96.5	5
17	6.32	5	0.22	5	96.5	5
18	6.35	5	0.24	5	96.2	5
19	6.38	5	0.25	5	96.0	5
20	6.36	1	0.23	1	96.3	1
21						
22	6.31	1	0.25	1	96.0	1
23	6.34	3	0.23	3	96.3	3
AVERAGE FOR THE DAY	6.40	21	0.25	20	96.1	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.65	546	0.38	523	94.3	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1	6.24	5	0.23	5	96.3	5	
2	6.31	5	0.31	5	95.2	5	
3	6.36	5	0.83	5	86.9	5	
4	6.36	5	1.10	5	82.7	5	
5	6.36	5	1.05	5	83.5	5	
6	6.35	5	0.99	5	84.4	5	
7	6.31	5	0.98	5	84.5	5	
8	6.27	5	0.94	5	85.0	5	
9	6.31	5	1.10	5	82.6	5	
10	6.34	5	1.28	5	79.8	5	
11	6.28	5	1.46	5	76.7	5	
12	6.26	5	1.72	5	72.6	5	
13	6.28	5	1.83	5	70.8	5	
14		0		0		0	
15							
16	6.59	3	0.28	3	95.8	3	
17	5.96	2	0.32	5	94.7	2	
18		0	0.37	5		0	
19		0	0.35	5		0	
20		0	0.50	5		0	
21		0	0.67	5		0	
22		0	0.67	5		0	
23		0	0.62	5		0	
AVERAGE FOR THE DAY	6.30	15	0.84	21	84.8		15 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.64	539	0.39	523	94.2		20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Inlet O_2 monitor out of service

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 18, 1981

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HOUR     E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
        LB.SO2   OF   LB.SO2  OF    EFF.   OF
        /MMBTU  PTS  /MMBTU  PTS    %     PTS
  0              0             0           0
  1              0    0.32     5           0
  2              0    0.27     5           0
  3              0    0.27     5           0
  4              0    0.28     5           0
  5              0    0.24     3           0
  6              0    0.24     5           0
  7              0    0.26     1           0
  8              0             0           0
  9              0    0.29     4           0
 10              0             0           0
 11              0             0           0
 12              0    0.45     4           0
 13              0    0.55     5           0
 14              0             0           0
 15              0    0.54     5           0
 16              0    0.56     5           0
 17              0             0           0
 18              0    0.67     5           0
 19              0    0.68     5           0
 20              0    0.57     5           0
 21              0    0.50     5           0
 22              0    0.47     5           0
 23              0    0.43     5           0

AVERAGE
FOR THE          0    0.42    18          0 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY
AVERAGE   6.63  516   0.39   519   94.1   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
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Inlet O_2 monitor out all day

D-194

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 19, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	0.45	5		0
1		0	0.44	5		0
2		0	0.45	4		0
3		0		0		0
4		0	0.39	3		0
5		0	0.50	5		0
6		0	0.53	5		0
7		0	0.52	1		0
8		0		0		0
9		0	0.49	4		0
10		0	0.52	5		0
11		0	0.56	5		0
12		0	0.62	5		0
13		0	0.57	5		0
14		0		0		0
15		0		0		0
16		0		0		0
17		0		0		0
18		0	0.61	4		0
19		0	0.65	5		0
20		0	0.65	5		0
21		0	0.73	5		0
22		0	0.72	5		0
23		0	0.72	5		0
AVERAGE FOR THE DAY		0	0.56	18		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.61	493	0.40	515	94.0	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Inlet O_2 monitor out all day

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      APR 20, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2  OF   LB.SO2  OF   EFF.    OF
             /MMBTU  PTS  /MMBTU  PTS   %      PTS

     0                0   0.74    4             0
     1                0   0.70    5             0
     2                0   0.66    5             0
     3                0   0.65    5             0
     4                0   0.65    5             0
     5                0   0.62    5             0
     6                0   0.61    5             0
     7                0   0.65    2             0
     8                0           0             0
     9                0   0.63    3             0
    10                0   0.69    5             0
    11                0   0.63    5             0
    12                0   0.60    5             0
    13                0   0.52    5             0
    14                0           0             0
    15                0   0.42    5             0
    16                0   0.42    5             0
    17                0           0             0
    18                0   0.47    2             0
    19                0   0.40    5             0
    20                0   0.39    5             0
    21                0   0.38    5             0
    22                0   0.36    5             0
    23                0   0.38    5             0

  AVERAGE
  FOR THE
    DAY               0   0.55   21            0 HOURS OF MONITORING DATA

  ROLLING
   30 DAY
  AVERAGE   6.59   474   0.40   518   94.0   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
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Inlet O_2 monitor out all day

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       APR 21, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0               0    0.35    5            0
     1               0    0.32    3            0
     2               0            0            0
     3               0            0            0
     4               0            0            0
     5               0    0.37    3            0
     6               0    0.34    5            0
     7               0    0.34    2            0
     8               0            0            0
     9               0    0.32    3            0
    10               0    0.34    5            0
    11               0    0.25    5            0
    12               0    0.25    5            0
    13               0    0.27    5            0
    14               0            0            0
    15               0    0.23    2            0
    16               0    0.27    5            0
    17               0    0.26    5            0
    18               0            0            0
    19               0    0.29    5            0
    20               0    0.28    5            0
    21               0    0.25    5            0
    22               0    0.29    5            0
    23               0    0.34    5            0

 AVERAGE
 FOR THE             0    0.30   18           0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY
 AVERAGE   6.55    453    0.39  517   94.1    16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

Inlet O_2 monitor out all day

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

APR 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	0.27	5		0
1		0	0.25	5		0
2		0	0.24	5		0
3		0	0.21	5		0
4		0	0.20	5		0
5		0	0.21	5		0
6		0	0.20	5		0
7		0	0.21	2		0
8		0		0		0
9		0	0.19	3		0
10		0	0.19	5		0
11		0	0.20	5		0
12		0	0.20	5		0
13		0	0.20	5		0
14		0		0		0
15	6.05	2	0.20	4	96.4	2
16	5.98	5	0.53	5	91.2	5
17	6.18	2	0.42	2	93.2	2
18	6.18	5	0.34	5	94.5	5
19	6.14	5	0.32	5	94.8	5
20	6.22	5	0.28	5	95.6	5
21	6.20	5	0.15	5	97.5	5
22	6.18	5	0.13	5	97.9	5
23	6.21	5	0.15	5	97.6	5
AVERAGE FOR THE DAY	6.15	9	0.24	22	95.4	9 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.52	445	0.37	522	94.3	16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Inlet O_2 monitor repaired

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          APR 23, 1981

              E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
      HOUR    LB.SO2   OF   LB.SO2   OF    EFF.   OF
              /MMBTU   PTS  /MMBTU   PTS    %     PTS
        0      6.22     5    0.21     5    96.6    5
        1      6.31     5    0.26     5    95.9    5
        2      6.33     5    0.25     5    96.0    5
        3      6.36     5    0.25     5    96.1    5
        4      6.42     5    0.25     5    96.2    5
        5      6.44     5    0.28     5    95.6    5
        6      6.47     5    0.30     5    95.3    5
        7      6.51     5    0.28     2    95.7    2
        8    S-2 down - boiler down - ruptured tube
        9
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19
       20
       21
       22
       23


   AVERAGE
   FOR THE     6.38     8    0.26     8    95.9    8 HOURS OF MONITORING DATA
     DAY

   ROLLING
    30 DAY
   AVERAGE     6.51   430    0.37   508    94.3   15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       MAY 20, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC. NO.
    HOUR    LB.SO2 OF   LB.SO2 OF    EFF.  OF
            /MMBTU PTS  /MMBTU PTS    %    PTS

      0
      1
      2
      3
      4
      5
      6
      7
      8
      9
     10
     11
     12
     13
     14
     15
     16              0   2.15   4
     17              0   2.12   1             0      Scrubber start up @ 0940
     18              0   2.13   5             0
     19              0   2.32   5             0
     20              0   2.24   5             0
     21              0   2.27   5             0
     22              0   2.25   5             0
     23              0   2.24   5             0

  AVERAGE
  FOR THE            0   2.22   8             0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      MAY 21, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

      0              0    2.30    5            0
      1              0    2.34    5            0
      2              0    2.31    5            0
      3              0    2.32    5            0
      4              0    2.25    5            0
      5              0    2.34    5            0
      6              0    2.47    5            0
      7              0    2.56    5            0
      8              0    2.62    5            0
      9              0    2.59    5            0
     10              0    2.47    4            0
     11              0    2.26    3            0
     12              0    1.89    2            0
     13              0    1.94    4            0
     14              0    1.78    4            0
     15              0    1.95    5            0
     16              0    1.97    5            0
     17              0    1.82    4            0
     18                                        0
     19              0    1.60    6            0
     20              0    1.74    5            0
     21              0    1.54    5            0
     22              0    1.72    5            0
     23              0    1.48    5            0

  AVERAGE
  FOR THE            0    2.10   23            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY
  AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

Inlet O_2 monitor down

Daily span and zero

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAY 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.74	5		0
1		0	1.75	5		0
2		0	1.84	5		0
3		0	1.63	5		0
4		0	1.57	5		0
5		0	1.60	5		0
6		0	1.66	5		0
7		0	1.78	5		0
8		0	1.73	5		0
9		0	1.91	1		0
10						
11		0	1.64	4		0
12		0	1.41	6		0
13		0	1.16	3		0
14		0	1.30	4		0
15		0	1.31	4		0
16						
17		0	1.47	1		0
18		0	1.35	5		0
19		0	1.45	5		0
20		0	1.45	5		0
21		0	1.62	5		0
22		0	1.59	5		0
23		0	1.58	4		0
AVERAGE FOR THE DAY		0	1.57	22		

Inlet O_2 monitor down

0 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       MAY 23, 1981

          E(IN)  NO. E(OUT) NO. REDUC. NO.
  HOUR    LB.SO2 OF  LB.SO2 OF   EFF.  OF
          /MMBTU PTS /MMBTU PTS   %    PTS

    0             0   1.40   4          0     Inlet O2 monitor down
    1             0   1.56   5          0
    2             0   1.56   5          0
    3             0   1.55   5          0
    4             0   1.60   5          0
    5             0   1.69   5          0
    6             0   1.84   5          0
    7             0   1.81   5          0
    8             0   0.95   5          0
    9             0   2.08   5          0
   10             0   1.90   5          0
   11             0   2.11   4          0
   12             0   2.03   5          0
   13             0   1.94   5          0
   14   Daily span and zero
   15             0   1.90   4          0
   16             0   2.06   5          0
   17             0   2.02   4          0
   18             0   1.99   2          0
   19             0   1.84   4          0
   20             0   1.98   5          0
   21             0   2.16   5          0
   22             0   2.29   4          0
   23             0   2.27   5          0

 AVERAGE
 FOR THE          0   1.85  23          0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAY 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	2.01	5		0
1		0	2.02	5		0
2		0	1.96	5		0
3		0	1.99	5		0
4		0	2.02	5		0
5		0	2.04	5		0
6		0	2.10	5		0
7		0	2.14	5		0
8		0	2.10	5		0
9		0	2.31	5		0
10		0	2.28	5		0
11		0	2.22	5		0
12		0	2.04	5		0
13		0	2.06	5		0
14		0	2.07	5		0
15		0	2.13	5		0
16		0	2.11	5		0
17		0	2.17	5		0
18		0	2.05	3		0
19		0	1.81	2		0
20		0	1.79	5		0
21		0	1.75	4		0
22	Daily span and zero					
23		0	1.58	5		0
AVERAGE FOR THE DAY		0	2.03	23		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      MAY 25, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0    1.47    5            0
    1              0    1.52    5            0
    2              0    1.55    5            0
    3              0    1.53    5            0
    4              0    1.48    5            0
    5              0    1.43    5            0
    6              0    1.43    5            0
    7              0    1.39    5            0
    8              0    1.57    5            0
    9              0    1.50    3            0
   10              0    1.74    5            0
   11              0    1.85    1            0
   12              0    1.87    5            0
   13              0    2.00    4            0
   14              0    2.12    5            0
   15              0    2.12    5            0
   16              0    2.05    4            0
   17              0    2.04    2            0
   18              0    2.03    5            0
   19              0    1.97    5            0
   20              0    2.01    5            0
   21              0    1.98    5            0
   22              0    1.84    5            0
   23              0    1.92    5            0

 AVERAGE
 FOR THE           0    1.77   24            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

Inlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAY 26, 1981

Inlet O_2 monitor down

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.91	5		0
1		0	1.91	5		0
2		0	2.00	5		0
3		0	2.00	5		0
4		0	2.01	5		0
5		0	1.98	5		0
6		0	2.03	5		0
7		0	1.94	5		0
8		0	2.01	5		0
9		0	2.05	5		0
10		0	2.12	5		0
11		0	2.14	5		0
12		0	2.26	5		0
13		0	2.34	5		0
14	Testing for zero drift					
15	Testing for zero drift					
16	Testing for zero drift					
17		0	2.32	4		0
18		0	2.25	5		0
19		0	2.12	5		0
20		0	2.01	5		0
21		0	2.02	5		0
22		0	2.05	5		0
23		0	2.24	5		0
AVERAGE FOR THE DAY		0	2.08	21		0 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAY 27, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	2.35	4		0
1		0	2.30	5		0
2		0	2.27	5		0
3		0	2.23	5		0
4		0	2.25	5		0
5		0	2.24	5		0
6		0	2.17	5		0
7		0	2.27	5		0
8		0	2.32	5		0
9		0	2.23	5		0
10		0	2.20	5		0
11		0	1.72	2		0
12						
13						
14						
15						
16		0	2.40	2		0
17		0	2.34	5		0
18		0	2.33	4		0
19		0	2.28	5		0
20		0	2.26	5		0
21		0	2.29	5		0
22		0	2.30	5		0
23		0	2.14	5		0
AVERAGE FOR THE DAY		0	2.24	20		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

Daily span and zero

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     MAY 28, 1981

          E(IN)    NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2    OF   LB.SO2  OF    EFF.   OF
         /MMBTU    PTS  /MMBTU  PTS    %     PTS

   0                0    2.09    5            0
   1                0    2.12    5            0
   2                0    2.15    5            0
   3                0    2.16    5            0
   4                0    2.13    5            0
   5                0    2.08    5            0
   6                0    2.08    5            0
   7                0    2.08    5            0
   8                0    1.96    5            0
   9                0    2.12    4            0
  10
  11                0    2.30    3            0
  12                0    2.16    5            0
  13                0    2.03    4            0
  14                0    2.02    4            0
  15                0    2.03    5            0
  16                0    1.98    5            0
  17
  18
  19
  20
  21                0    1.94    1            0
  22                0    2.03    5            0
  23                0    1.93    5            0

 AVERAGE
 FOR THE
   DAY              0    2.08   19         0 HOURS OF MONITORING DATA

 ROLLING
  30 DAY
 AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

SO_2 stratification check

Data acquisition system down

Inlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAY 29, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.86	5		0
1		0	1.80	5		0
2		0	1.76	5		0
3		0	1.75	5		0
4		0	1.72	4		0
5	Data acquisition system down					
6	Data acquisition system down					
7		0	1.77	3		0
8		0	2.17	5		0
9		0	2.27	5		0
10		0	2.12	5		0
11		0	2.02	5		0
12		0	2.12	5		0
13		0	2.15	5		0
14	O_2 stratification check					
15	O_2 stratification check					
16		0	1.67	1		0
17		0	1.73	3		0
18		0	1.64	4		0
19		0	1.73	5		0
20		0	1.74	5		0
21		0	1.74	5		0
22		0	1.57	3		0
23		0	1.66	5		0
AVERAGE FOR THE DAY		0	1.85	20		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

MAY 30, 1981

Inlet O_2 monitor down

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.62	5		0
1		0	1.54	3		0
2		0	1.56	5		0
3		0	1.52	5		0
4		0	1.52	5		0
5		0	1.59	5		0
6		0	1.37	5		0
7		0	1.37	5		0
8		0	1.27	5		0
9		0	1.32	5		0
10		0	1.48	5		0
11		0	1.53	5		0
12		0	1.48	5		0
13		0	1.42	6		0
14		0	1.51	4		0
15		0	1.56	2		0
16	Daily span and zero					
17		0	1.56	4		0
18		0	1.51	5		0
19		0	1.51	5		0
20		0	1.48	5		0
21		0	1.48	5		0
22		0	1.48	5		0
23		0	1.49	5		0
AVERAGE FOR THE DAY		0	1.49	23		0 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       MAY 31, 1981

           E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
  HOUR    LB.SO2    OF   LB.SO2   OF    EFF.   OF
          /MMBTU    PTS  /MMBTU   PTS    %     PTS

    0                0    1.53     5            0      Inlet O2 monitor down
    1                0    1.45     5            0
    2                0    1.43     5            0
    3                0    1.37     6            0
    4                0    1.43     5            0
    5                0    1.44     5            0
    6                0    1.40     5            0
    7                0    1.42     3            0
    8     Daily span and zero
    9     Daily span and zero
   10                0    1.54     2            0
   11                0    1.53     5            0
   12                0    1.55     5            0
   13                0    1.57     5            0
   14                0    1.46     2            0
   15     Zero check on SO2 monitors
   16                0    1.47     5            0
   17                0    1.48     5            0
   18                0    1.52     5            0
   19     Data acquisition system down
   20
   21
   22
   23


 AVERAGE
 FOR THE             0    1.48    16            0 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JUNE 1, 1981

          E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
HOUR     LB.SO2  OF   LB.SO2 OF    EFF.   OF
         /MMBTU  PTS  /MMBTU PTS    %     PTS

  0  Data acquisition system down                          Inlet O2 monitor down
  1
  2
  3
  4
  5
  6                0    1.29   2            0
  7                0    1.54   1            0
  8                0    1.69   5            0
  9                0    1.75   5            0
 10  Data acquisition system down
 11                0    1.75   5            0
 12                0    1.69   3            0
 13                0    1.75   2            0
 14  Data acquisition system down
 15                0    1.75   5            0
 16                0    1.70   1            0
 17  Data acquisition system down
 18
 19
 20
 21
 22
 23                0    1.43   1            0

AVERAGE
FOR THE            0    1.64  10            0 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.40	5		0
1		0	1.37	3		0
2		0	1.38	4		0
3		0	1.35	4		0
4		0	1.36	4		0
5		0	1.31	5		0
6		0	1.46	6		0
7		0	1.64	5		0
8		0	1.66	4		0
9		0	1.50	4		0
10		0	1.52	5		0
11		0	1.44	5		0
12		0	1.46	5		0
13		0	1.64	5		0
14	5.62	1	1.65	2	70.1	1
15	5.42	5	1.63	5	70.0	5
16	5.28	5	1.55	5	70.7	5
17	5.29	5	1.74	5	67.1	5
18	5.27	5	1.62	5	69.3	5
19	5.30	5	1.70	5	68.0	5
20	5.26	5	1.62	5	69.3	5
21	5.36	5	1.58	5	70.5	5
22	5.36	5	1.65	5	69.3	5
23	5.34	5	1.61	5	69.8	5
AVERAGE FOR THE DAY	5.35	10	1.53	24	69.3	9 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.36	5	1.44	5	73.1	5	
1	5.32	2	1.56	3	72.5	2	
2	5.63	5	1.87	5	66.8	5	
3	5.48	5	1.42	5	74.2	5	
4	5.50	5	1.40	5	74.6	5	
5	5.45	5	1.39	5	74.6	5	
6	5.54	5	1.46	5	73.6	5	
7	5.66	5	1.84	5	67.5	5	
8	5.56	5	1.86	5	66.6	5	
9	5.60	5	1.64	5	70.7	5	
10	5.64	4	1.66	4	70.6	4	
11		0	1.63	5		0	Inlet O_2 monitor down
12		0	1.85	5		0	Inlet O_2 monitor down
13		0	1.74	5		0	Inlet O_2 monitor down
14	SO_2 stratification check						
15	SO_2 stratification check						
16	5.86	2	1.77	2	70.3	1	
17	5.94	5	1.73	5	70.9	5	
18	5.93	5	1.72	5	71.0	5	
19	5.92	5	1.97	5	66.7	5	
20	5.93	5	1.97	5	66.7	5	
21	6.01	5	2.10	5	65.1	5	
22	6.03	5	2.16	5	64.1	5	
23	6.00	2	2.21	2	63.1	2	
AVERAGE FOR THE DAY	5.70	19	1.75	22	69.6	18 HOURS OF MONITORING DATA	

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1		0	1.69	2		0
2		0	1.66	5		0
3	6.06	5	1.75	5	71.1	5
4	6.04	5	1.63	5	73.0	5
5	6.09	5	1.51	5	75.3	5
6	6.03	5	1.53	5	74.6	5
7	6.00	5	1.89	5	68.4	5
8	6.00	5	2.02	5	66.3	5
9	6.00	5	2.07	5	65.5	5
10	5.97	5	2.09	5	64.9	5
11	SO_2 stratification check ↓					
12						
13						
14						
15	5.97	6	1.69	6	71.7	6
16	5.98	4	1.94	4	67.6	4
17	5.87	2	1.76	2	70.0	2
18	5.86	5	1.68	5	71.3	5
19	5.89	5	1.75	5	70.3	5
20	5.90	5	1.73	5	70.6	5
21	5.92	5	1.91	5	67.8	5
22	5.93	5	1.81	5	69.5	5
23	5.93	5	1.82	5	69.3	5
AVERAGE FOR THE DAY	5.97	17	1.79	19	69.8	17 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     JUNE 5, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS     %     PTS

   0
   1      5.90    5    1.72    5    70.9    5
   2      5.84    5    1.66    5    71.6    5
   3      5.72    5    1.52    5    73.5    5
   4      5.65    4    1.49    4    73.6    4
   5      5.59    5    1.51    5    72.9    5
   6      5.55    3    1.72    3    69.1    3
   7      5.51    5    1.69    5    69.3    5
   8      5.47    5    1.54    5    71.8    5
   9      5.42    5    1.41    5    73.9    5
  10      5.40    5    1.46    5    73.0    5
  11      5.45    5    1.53    5    72.0    5
  12      5.43    5    1.68    5    69.1    5
  13      5.45    5    1.77    5    67.6    5
  14      5.53    5    1.86    5    66.3    5
  15      5.53    5    2.00    5    63.8    5
  16      5.55    4    2.08    4    62.6    4
  17      5.66    5    1.93    5    65.9    5
  18      5.68    4    1.91    4    66.4    4
  19      5.76    4    2.02    4    65.0    4
  20      5.98    5    2.00    5    66.6    5
  21      6.16    5    2.05    5    66.8    5
  22      6.34    5    1.92    5    69.6    5
  23      6.12    5    2.04    5    66.7    5

AVERAGE
FOR THE   5.68   23    1.76   23    69.0   23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JUNE 6, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0      6.08     5    2.39    5    60.7    5
     1      6.12     5    2.50    5    59.2    5
     2      6.04     5    1.65    5    72.6    5
     3      6.00     4    1.81    4    69.8    4
     4      5.99     5    1.88    5    68.7    5
     5      6.06     5    1.91    5    68.5    5
     6      6.05     5    1.84    5    69.6    5
     7      6.07     5    1.95    5    67.9    5
     8      6.20     5    1.94    5    68.8    5
     9      6.14     5    1.95    5    67.6    5
    10      6.17     2    1.98    2    67.9    2
    11      6.28     5    2.08    5    66.9    5
    12      6.14     5    1.98    5    67.8    5
    13      6.08     5    2.11    5    65.3    5
    14      6.07     4    1.94    4    68.1    4
    15  Daily span and zero
    16  Daily span and zero
    17  Daily span and zero
    18      6.13     5    2.41    5    60.7    5
    19      6.12     5    2.38    5    61.2    5
    20      6.20     5    2.41    5    61.2    5
    21      6.17     2    2.35    2    61.9    2
    22  Data acquisition system down
    23  Data acquisition system down

 AVERAGE
 FOR THE    6.11    19    2.08   19    66.0   19 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	**Data acquisition system down**					
1	**Data acquisition system down**					
2	5.84	1	1.77	1	69.7	1
3	6.01	5	1.90	5	68.3	5
4	5.92	5	1.86	5	68.6	5
5	5.82	5	1.83	5	68.5	5
6	5.89	5	1.85	5	68.5	5
7	5.93	5	1.89	5	68.1	5
8	5.91	5	1.87	5	68.4	5
9	5.81	5	1.82	5	68.7	5
10	5.73	5	1.82	5	68.2	5
11	5.71	5	1.89	5	66.9	5
12	5.75	5	1.92	5	66.6	5
13	5.76	5	1.88	5	67.4	5
14	5.89	5	1.97	5	66.5	5
15	5.90	5	2.03	5	65.6	5
16	5.93	5	2.10	5	64.6	5
17	5.37	3	1.88	3	64.5	3
18	5.87	5	1.99	5	66.2	5
19	5.85	5	2.06	5	64.7	5
20	5.81	5	2.18	5	62.5	5
21	5.83	5	2.03	5	65.1	5
22	5.81	5	1.95	5	66.4	5
23	5.69	5	1.78	5	68.7	5
AVERAGE FOR THE DAY	5.82	22	1.92	22	66.8	21 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE   NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                           JUNE 8, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0        5.63    5     1.79    5    68.1    5
     1        5.59    5     1.75    5    68.7    5
     2        5.68    5     1.86    5    67.3    5
     3        5.85    5     1.93    5    66.9    5
     4        5.80    5     1.93    5    66.7    5
     5        5.83    5     1.98    5    66.1    5
     6        5.84    5     1.98    5    66.1    5
     7        6.06    5     2.02    5    66.7    5
     8        5.99    5     2.13    5    64.5    5
     9        5.93    5     2.22    5    62.6    5
    10        5.91    4     2.25    4    61.9    4
    11        5.84    5     2.30    5    60.5    5
    12        5.81    5     2.63    5    54.7    5
    13        5.79    5     2.72    5    53.0    5
    14        5.93    5     2.67    5    55.0    5
    15        5.87    5     2.58    5    56.0    5
    16        5.83    3     2.53    3    56.6    3
    17        5.80    2     2.61    2    55.0    2
    18        5.90    5     2.65    5    55.1    5
    19        5.86    5     2.57    5    56.1    5
    20        5.96    5     2.57    5    56.1    5
    21        5.90    5     2.59    5    56.1    5
    22        5.95    5     2.61    5    56.2    5
    23        6.06    5     2.52    5    58.4    5

 AVERAGE
 FOR THE      5.85   24     2.31   24    60.6  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.84	3	2.21	3	62.2	3
1	5.93	5	2.39	5	59.7	5
2	5.90	5	2.34	5	60.4	5
3	5.94	5	2.30	5	61.2	5
4	5.76	5	2.29	5	60.1	5
5	6.01	5	2.34	5	61.1	5
6	6.02	5	2.38	5	60.4	5
7	6.06	5	2.60	5	57.1	5
8	5.98	5	2.71	5	54.7	5
9	5.99	5	2.77	5	53.8	5
10	6.01	5	2.82	5	53.0	5
11	5.84	5	2.77	5	52.6	5
12	5.89	5	2.67	5	54.6	5
13	5.86	5	2.75	5	53.1	5
14	5.88	5	2.18	5	63.4	5
15	5.99	5	2.65	5	55.8	5
16	5.93	5	2.63	5	55.6	5
17	5.80	3	2.67	3	54.0	3
18	5.89	5	2.69	5	54.4	5
19	5.96	5	2.70	5	54.8	5
20	5.97	5	2.72	5	54.5	5
21	5.99	5	2.70	5	54.9	5
22	5.98	5	2.70	5	54.9	5
23	6.03	5	2.40	5	60.2	5
AVERAGE FOR THE DAY	5.93	24	2.56	24	56.9	24 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.05	5	1.68	5	72.2	5	
1	5.92	5	1.40	5	76.3	5	
2	5.92	5	1.31	5	77.9	5	
3	5.94	5	1.31	5	78.0	5	
4	5.95	5	1.40	5	76.5	5	
5	5.96	5	1.55	5	74.1	5	
6	5.91	5	1.60	5	72.9	5	
7	5.89	5	1.60	5	72.7	5	
8	5.80	5	1.59	5	72.6	5	
9	5.82	5	1.63	5	72.0	5	
10	5.87	5	1.64	5	72.0	5	
11	5.98	5	1.78	5	70.3	5	
12	5.94	5	1.82	5	69.4	5	
13	5.97	5	1.87	5	68.7	5	
14	5.99	5	1.93	5	67.8	5	
15	Daily span and zero						
16	5.61	1	1.48	1	73.7	1	
17	5.93	5	2.26	5	61.8	5	
18	6.08	5	2.34	5	61.5	5	
19	6.09	5	2.23	5	63.4	5	
20	6.07	5	2.25	5	62.9	5	
21	6.02	5	2.24	5	62.8	5	
22	5.85	5	2.12	5	63.8	5	
23	5.87	4	2.07	4	64.7	4	Boiler down @ 2336
AVERAGE FOR THE DAY	5.93	23	1.79	23	69.7	22 HOURS OF MONITORING DATA	

ROLLING 30 DAY AVERAGE NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							Boiler up @ 0150
2							Boiler down @ 0228
3							Boiler up @ 0326
4							
5							
6							
7							
8							
9							
10							
11							Scrubber up @ 1140
12							
13	5.82	1	2.23	1	61.7	1	
14							
15							
16	5.97	3	2.17	3	63.7	3	
17	6.16	5	2.50	5	59.4	5	
18	6.15	5	2.41	5	60.9	5	
19	6.14	5	2.29	5	62.6	5	
20	6.21	5	2.33	5	62.5	5	
21	6.15	5	2.28	5	62.9	5	
22	6.12	5	2.44	5	60.1	5	
23	6.14	5	2.22	5	63.8	5	
AVERAGE FOR THE DAY	6.10	9	2.32	9	62.0	8 HOURS OF MONITORING DATA	

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JUNE 12, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS   /MMBTU  PTS    %     PTS

    0       5.93    5     2.05    5    65.5    5
    1       5.99    4     1.97    4    67.1    4
    2       5.85    5     1.93    5    67.0    5
    3       5.78    4     1.92    4    66.7    4
    4       5.79    5     1.99    5    65.6    5
    5       5.82    5     2.02    5    65.3    5
    6       5.85    2     2.02    2    65.5    2
    7       6.18    5     2.46    5    60.2    5
    8       6.20    4     2.73    4    56.0    4
    9       6.02    4     2.65    4    55.9    4
   10       6.03    5     2.49    5    58.8    5
   11       5.97    5     2.60    5    56.5    5
   12       5.91    2     2.67    2    54.9    2
   13   Daily span and zero
   14       5.83    5     2.46    5    57.9    5
   15       5.81    5     2.38    5    59.1    5
   16       5.79    4     2.32    4    59.9    4
   17       5.78    2     2.43    2    57.9    2
   18       5.83    5     2.41    5    58.6    5
   19       5.92    5     2.21    5    62.5    5
   20       5.66    5     1.59    5    71.9    5
   21       5.70    5     1.74    5    69.5    5
   22       5.68    4     2.06    4    63.7    4
   23   Boiler down @ 2335

 AVERAGE
 FOR THE    5.88   22     2.23   22    62.1   22 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-1

                   JUNE 13, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0
     1             0            0            0
     2                                             Boiler down all day
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

 AVERAGE
 FOR THE           0            0          0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY
 AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JUNE 14, 1981

                E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
               /MMBTU  PTS  /MMBTU  PTS     %     PTS

        0
        1                0            0            0      Boiler down all day
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19
       20
       21
       22
       23

     AVERAGE
     FOR THE           0            0            0 HOURS OF MONITORING DATA
       DAY

     ROLLING
      30 DAY
     AVERAGE   NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JUNE 15, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS   /MMBTU PTS     %     PTS

   0
   1              0            0            0     Boiler down all day
   2
   3
   4
   5
   6
   7
   8
   9
  10
  11
  12
  13
  14
  15
  16
  17
  18
  19
  20
  21
  22
  23

AVERAGE
FOR THE           0            0            0 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     JUNE 16, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0
     1               0            0            0     Boiler down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE
   DAY             0            0          0 HOURS OF MONITORING DATA


 ROLLING
  30 DAY
 AVERAGE    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JUNE 17, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR    LB.SO2   OF   LB.SO2   OF   EFF.    OF
              /MMBTU  PTS  /MMBTU   PTS    %     PTS

         0
         1              0            0            0
         2                                             Boiler down all day
         3
         4
         5
         6
         7
         8
         9
        10
        11
        12
        13
        14
        15
        16
        17
        18
        19
        20
        21
        22
        23

    AVERAGE
    FOR THE            0           0           0 HOURS OF MONITORING DATA
      DAY

    ROLLING
     30 DAY    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
    AVERAGE
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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JUNE 18, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1                 0            0            0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


  AVERAGE
  FOR THE            0            0          0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY
  AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

Boiler up @ 1747
Scrubber down all day

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                         JUNE 19, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS    %     PTS

        0
        1               0            0           0      Scrubber down
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12
       13
       14
       15
       16
       17     5.76    3    1.93    3    66.5    3
       18     5.66    4    2.20    5    61.6    4      Scrubber up @ 1730
       19     5.41    1    1.87    1    65.3    1
       20     5.56    5    1.84    5    66.9    5
       21     5.65    5    1.82    5    67.8    5
       22     5.68    5    1.78    5    68.6    5
       23     5.64    5    1.69    5    70.0    5

   AVERAGE
   FOR THE    5.62    7    1.88    7    66.9   6 HOURS OF MONITORING DATA
     DAY

   ROLLING
    30 DAY
   AVERAGE    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JUNE 29, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0      5.68    5    1.63    5    71.4    5
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

 AVERAGE
 FOR THE   5.68    1    1.63    1    71.4    1 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

Boiler down @ 0103
Boiler up @ 0115
Scrubber down

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                         JUNE 21, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR       LB.SO2  OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0
     1                0            0            0     Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

AVERAGE
FOR THE               0            0            0 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JUNE 22, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0
    1                0            0            0
    2                                                 Scrubber down all day
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE
   DAY              0            0            0 HOURS OF MONITORING DATA

 ROLLING
  30 DAY
 AVERAGE    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JUNE 23, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0
     1                                                   Scrubber down
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21       5.45    3    1.42    3    74.0     3
    22       5.96    5    1.64    5    72.6     5        Scrubber up @ 2120
    23       5.90    5    1.65    5    72.0     5

  AVERAGE
  FOR THE    5.77    3    1.57    3    72.8    3 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.83	5	1.70	5	70.8	5
1	5.79	5	1.70	5	70.6	5
2	5.82	5	1.54	5	73.6	5
3	5.72	5	1.45	5	74.7	5
4	5.72	5	1.35	5	76.4	5
5	5.73	5	1.38	5	75.9	5
6	5.76	5	1.45	5	74.9	5
7	5.73	5	1.54	5	73.1	5
8	5.68	5	1.47	5	74.1	5
9	5.74	5	1.45	5	74.6	5
10	SO_2 calibration test					
11	SO_2 calibration test					
12	SO_2 calibration test					
13	5.77	3	1.47	3	74.4	3
14	5.67	5	1.50	5	73.5	5
15	5.68	2	1.66	2	70.8	2
16	5.75	3	1.93	4	66.4	3
17	5.70	5	1.83	5	67.8	5
18	5.70	5	1.75	5	69.2	5
19	5.67	4	1.80	4	68.2	5
20	5.71	5	1.94	5	66.1	4
21	5.73	5	2.08	5	63.7	5
22	5.61	5	1.87	5	66.8	5
23	5.70	5	1.81	5	68.3	5
AVERAGE FOR THE DAY	5.72	21	1.65	21	71.1	21 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.71	4	1.62	4	71.6	4
1	5.71	5	1.47	5	74.3	5
2	5.75	5	1.48	5	74.3	5
3	5.71	5	1.46	5	74.5	5
4	5.70	3	1.37	3	76.0	3
5	5.69	5	1.41	5	75.3	5
6	5.71	4	1.39	4	75.6	4
7	5.69	5	1.32	5	76.7	5
8	5.77	5	1.18	5	79.5	5
9	5.83	1	1.13	1	80.7	1
10	**Data acquisition system down**					
11	5.77	5	1.16	5	79.9	5
12	5.80	5	1.51	5	74.0	5
13	5.84	5	1.77	5	69.7	5
14	5.81	5	1.72	5	70.4	5
15	5.81	5	1.51	5	74.0	5
16	**Daily span and zero**					
17	5.78	5	1.71	5	70.4	5
18	5.63	5	1.73	5	69.2	5
19	5.78	5	1.73	5	70.1	5
20	5.74	5	1.74	5	69.7	5
21	5.77	5	1.49	5	74.2	5
22	5.79	5	1.26	5	78.3	5
23	5.73	5	1.25	5	78.2	5
AVERAGE FOR THE DAY	5.75	22	1.47	22	74.1	21 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 26, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	5.75	4	0.85	4	85.1	4
2	5.75	5	0.81	5	86.0	5
3	5.78	5	0.83	5	85.6	5
4	5.77	4	0.79	4	86.3	4
5	5.70	5	0.76	5	86.7	5
6	5.71	4	0.75	4	86.8	4
7	5.74	5	0.79	5	86.3	5
8	5.71	5	1.05	5	81.6	5
9	5.69	5	1.30	5	77.2	5
10	5.71	3	1.29	3	77.6	3
11	**SO_2 stratification check**					
12	5.60	4	0.78	5	85.9	4
13	**Data acquisition system down**					
14	**Data acquisition system down**					
15	5.66	4	0.72	4	87.2	4
16	5.70	5	0.73	5	87.1	5
17	5.69	4	0.72	4	87.3	4
18	5.77	4	0.71	4	87.7	4
19	5.84	5	0.73	5	87.5	5
20	5.84	5	0.98	5	83.2	5
21	5.86	5	0.98	5	83.3	5
22	5.91	5	0.63	5	89.4	5
23	5.85	5	0.65	5	88.9	5

AVERAGE FOR THE DAY 5.75 20 0.84 20 85.3 20 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 27, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.95	4	0.56	4	90.6	4
1	5.93	5	0.53	5	91.1	5
2	5.91	5	0.47	5	92.0	5
3	6.01	4	0.46	5	92.2	4
4	5.95	5	0.43	5	92.7	5
5	5.96	5	0.40	5	93.4	5
6	6.00	5	0.40	5	93.3	5
7	5.99	3	0.40	3	93.3	3
8	**Data acquisition system down**					
9	6.18	1	0.48	1	92.3	1
10	6.04	4	0.41	4	93.2	4
11	**Daily span and zero**					
12	5.89	3	1.20	3	79.6	3
13	5.81	5	1.16	5	80.1	5
14	5.78	5	1.18	5	79.6	5
15	5.78	5	1.16	5	79.9	5
16	5.74	5	1.04	5	81.9	5
17	5.78	5	0.89	5	84.5	5
18	5.75	5	0.76	5	86.7	5
19	5.78	5	0.74	5	87.2	5
20	5.82	4	0.86	4	85.3	4
21	5.81	5	1.08	5	81.4	5
22	5.85	5	1.27	5	78.3	5
23	5.96	5	1.20	5	79.9	5
AVERAGE FOR THE DAY	5.89	22	0.78	22	86.5	21 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.81	5	0.86	5	85.2	5
1	5.91	5	0.49	5	91.7	5
2	5.85	5	0.50	5	91.4	5
3	5.86	5	0.46	5	92.1	5
4	5.87	5	0.47	5	91.9	5
5	5.91	5	0.48	5	92.0	5
6	5.98	5	0.51	5	91.4	5
7	5.97	5	0.57	5	90.4	5
8	6.06	5	0.60	5	90.1	5
9	6.07	5	0.59	5	90.3	5
10	6.02	3	0.58	3	90.3	3
11	6.01	3	0.64	3	89.4	3
12	6.04	5	0.66	5	89.1	5
13	5.87	5	0.65	5	88.9	5
14	5.93	5	0.81	5	86.3	5
15	5.94	5	0.89	5	85.0	5
16	5.95	5	0.86	5	85.5	5
17	5.89	6	0.63	6	89.3	6
18	5.90	5	0.45	5	92.3	5
19	5.89	5	0.36	5	93.9	5
20	5.90	5	0.42	5	92.9	5
21	5.88	5	0.33	5	94.5	5
22	5.94	5	0.43	5	92.8	5
23	5.96	5	0.47	5	92.1	5
AVERAGE FOR THE DAY	5.93	24	0.57	24	90.4	24 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JUNE 29, 1981

             E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0       6.10    5    0.41    5    93.3    5
     1       6.00    5    0.46    5    92.4    5
     2       5.99    5    0.56    5    90.7    5
     3       5.98    5    0.45    5    92.6    5
     4       5.94    5    0.28    5    95.4    5
     5       5.97    5    0.28    5    95.2    5
     6       5.97    5    0.28    5    95.4    5
     7       5.99    4    0.27    4    95.6    4
     8       5.97    1    0.26    1    95.6    1
     9       5.96    5    0.24    5    96.0    5
    10       5.89    5    0.23    5    96.2    5
    11       5.98    5    0.27    5    95.5    5
    12       5.85    5    0.24    5    95.9    5
    13       5.82    5    0.22    5    96.3    5
    14       5.82    5    0.20    5    96.5    5
    15       5.85    4    0.17    4    97.0    4
    16       5.78    3    0.19    3    96.7    3
    17   Daily span and zero
    18       5.69    1    0.22    1    96.1    1
    19       5.73    5    0.26    5    95.4    5
    20       5.74    5    0.26    5    95.5    5
    21       5.78    5    0.29    5    95.1    5
    22       5.81    5    0.30    5    94.8    5
    23       5.77    8    0.27    8    95.3    8

 AVERAGE
 FOR THE     5.89   23    0.29   23    95.1   21 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     5.82  300    1.66  551    71.5   12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JUNE 30, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.87	4	0.36	4	93.9	4	
1	5.92	5	0.35	5	94.1	5	
2	6.01	5	0.39	5	93.6	5	
3	5.98	5	0.38	5	93.7	5	
4	6.01	5	0.38	5	93.6	5	
5	5.96	5	0.40	5	93.3	5	
6	6.05	5	0.39	5	93.6	5	
7	6.07	5	0.39	5	93.6	5	
8	6.08	5	0.40	5	93.5	5	
9	6.07	5	0.47	5	92.2	5	
10	6.23	5	0.64	5	89.6	5	
11	6.19	4	0.77	4	87.5	4	
12	6.26	5	0.69	5	88.9	5	
13	6.28	5	0.88	5	85.9	5	
14	6.22	5	0.75	5	88.0	5	
15	6.18	6	0.71	6	88.5	6	
16	6.16	5	0.75	5	87.8	5	
17	6.23	1	0.90	1	85.6	1	
18	5.92	5	0.91	5	84.6	5	
19	6.25	4	0.92	4	85.2	4	
20	6.25	5	1.11	5	82.2	5	
21	6.28	5	1.16	5	81.5	5	
22	6.27	5	0.83	5	86.7	5	
23							
AVERAGE FOR THE DAY	6.12	23	0.65	23	89.6	22 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.84	323	1.61	566	72.5	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                  ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JULY 1, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS   /MMBTU  PTS    %     PTS

    0       6.41    5     0.50    5    92.2    5
    1       6.38    5     0.50    5    92.1    5
    2       6.32    5     0.51    5    92.0    5
    3       6.33    5     0.51    5    91.9    5
    4       6.38    5     0.59    5    90.7    5
    5       6.43    5     0.67    5    89.6    5
    6  Data acquisition system down
    7  Data acquisition system down
    8       6.58    3     0.73    3    89.0    3
    9       6.48    3     0.76    3    88.3    3
   10       6.36    5     0.65    5    89.8    5
   11       6.36    5     0.91    5    85.8    5
   12       6.29    5     0.94    5    85.0    5
   13       6.30    5     1.01    5    84.0    5
   14       6.31    3     0.92    3    85.5    3
   15  SO2 calibration check
   16  SO2 calibration check
   17       5.90    1     1.18    1    80.0    1
   18       6.47    5     1.18    5    81.8    5
   19       6.34    5     1.08    5    83.0    5
   20       6.34    5     0.98    5    84.6    5
   21       6.31    5     0.64    5    89.9    5
   22       6.41    5     0.74    5    88.5    5
   23       6.47    5     0.65    5    90.0    5


AVERAGE
FOR THE     6.36   20     0.78   20    88.1   19 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY     5.87  343     1.56  563    73.4   14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.39	5	0.67	5	89.4	5
1	6.27	5	0.62	5	90.2	5
2	6.36	5	0.68	5	89.3	5
3	6.41	5	0.68	5	89.4	5
4	6.50	5	0.69	5	89.4	5
5	6.52	5	0.68	5	89.6	5
6	6.48	4	0.77	4	88.2	4
7	6.54	5	0.82	5	87.5	5
8	6.59	5	0.87	5	86.8	5
9	6.60	5	0.85	5	87.2	5
10	6.58	4	1.27	4	80.7	4
11	Daily span and zero					
12	SO_2 calibration check					
13	6.49	4	1.44	4	77.8	4
14	6.43	5	1.43	5	77.7	5
15	6.39	5	1.49	5	76.6	5
16	6.43	5	1.28	5	80.1	5
17	6.46	5	1.52	5	76.5	5
18	6.43	3	1.89	3	70.6	3
19	6.45	1	1.38	1	78.7	1
20	6.58	1	3.29	1	49.9	1
21	6.63	5	2.87	5	56.6	5
22	6.56	5	3.57	5	45.6	5
23	6.81	5	2.36	5	65.6	5
AVERAGE FOR THE DAY	6.49	22	1.41	22	79.7	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.91	365	1.55	563	73.7	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.68	3	2.01	3	69.9	3	
1	6.65	5	1.70	5	74.4	5	
2	6.61	5	1.55	5	76.5	5	
3	6.52	4	1.45	4	77.7	4	
4	6.45	5	1.42	5	78.0	5	
5	6.46	5	1.29	5	80.0	5	
6	6.41	5	1.37	5	78.6	5	
7	6.42	5	1.27	5	80.2	5	
8	6.32	5	1.40	5	77.8	5	
9	6.27	5	1.38	5	78.0	5	
10	6.27	5	1.43	5	77.1	5	
11	6.15	5	1.38	5	77.6	5	
12	5.97	4	0.66	4	89.2	4	
13	5.95	6	1.07	6	82.0	6	
14	SO_2 stratification check						
15	SO_2 stratification check						
16	SO_2 stratification check						
17		0	0.79	1		0	
18	5.92	3	1.05	3	82.3	3	
19	Data acquisition system down						
20	↓						
21							
22							
23							
AVERAGE FOR THE DAY	6.34	15	1.33	16	78.6		15 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.93	380	1.54	556	74.1		15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                       JULY 4, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0   Data acquisition system down
    1
    2
    3
    4
    5
    6
    7      6.03     3    1.07    3    82.3    3
    8   Data acquisition system down
    9      6.06     5    1.03    5    83.0    5
   10      6.09     5    1.05    5    82.8    5
   11   Data acquisition system down
   12   Data acquisition system down
   13      6.10     5    0.94    5    84.6    5
   14      5.91     4    0.87    4    85.3    4
   15   Daily span and zero
   16      6.03     4    0.97    4    83.9    4
   17      6.05     5    0.99    5    83.7    5
   18      6.16     4    0.98    4    84.1    4
   19      6.31     4    0.99    4    84.3    4
   20      6.37     4    0.91    4    85.7    4
   21      6.31     5    0.91    5    85.6    5
   22      6.23     5    0.86    5    86.3    5
   23      6.29     5    0.93    5    85.3    5

AVERAGE
FOR THE    6.15    13    0.96   13    84.4   13 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    5.94   393    1.50  546    74.7   15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.37	5	1.00	5	84.4	5	
1	6.33	5	0.93	5	85.3	5	
2	6.33	5	1.00	5	84.1	5	
3	6.34	5	1.02	5	83.8	5	
4	6.38	5	1.02	5	83.9	5	
5	6.23	5	0.99	5	84.0	5	
6	6.37	5	1.02	5	84.0	5	
7	6.38	5	1.01	5	84.2	5	
8	6.32	5	1.04	5	83.6	5	
9	6.39	5	1.03	5	83.9	5	
10	6.33	5	1.06	5	83.3	5	
11	6.19	5	1.13	5	81.7	5	
12	6.19	5	1.24	5	80.0	5	
13	6.12	4	1.24	4	79.7	4	
14	5.06	1	1.14	1	77.5	1	
15	6.04	6	1.35	6	77.7	6	
16	6.04	5	1.21	5	80.0	5	
17	6.11	5	1.05	5	82.7	5	
18	6.19	4	1.00	4	83.8	4	
19	6.20	5	1.04	5	83.3	5	
20	6.18	5	0.95	5	84.6	5	
21	6.19	5	0.95	5	84.6	5	
22	6.26	5	0.96	5	84.6	5	
23	6.32	5	0.91	5	85.6	5	
AVERAGE FOR THE DAY	6.20	24	1.05	24	83.2		23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.95	417	1.47	546	75.3		16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.32	3	0.94	4	85.3	3	
1	6.31	5	0.71	5	88.8	5	
2	6.35	5	0.63	5	90.0	5	
3	6.31	5	0.67	5	89.3	5	
4	6.34	5	0.67	5	89.5	5	
5	6.32	5	0.73	5	88.4	5	
6	Data acquisition system down						
7	Data acquisition system down						
8	Data acquisition system down						
9	6.28	3	1.12	3	82.1	3	
10	6.15	5	1.13	5	81.6	5	
11	6.11	5	1.51	5	75.3	5	
12	6.14	5	1.67	5	72.7	5	
13	6.13	5	1.90	5	69.1	5	
14	6.13	5	1.88	5	69.3	5	
15	6.19	5	1.97	5	68.3	5	
16	6.27	5	2.07	5	67.0	5	
17	6.38	4	2.11	4	67.0	4	
18	6.35	1	1.60	1	74.8	1	
19	6.37	5	1.72	5	72.9	5	
20	6.43	5	1.61	5	75.0	5	
21	6.39	5	1.47	5	77.0	5	
22	6.47	5	1.47	5	77.3	5	
23	6.36	5	0.92	5	85.6	5	
AVERAGE FOR THE DAY	6.29	21	1.36	21	78.6		20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.97	438	1.44	546	75.8		17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.32	5	0.63	5	90.0	5
1	6.31	4	0.56	4	91.1	4
2	6.34	5	0.58	5	90.8	5
3	6.27	5	0.58	5	90.7	5
4	6.32	5	0.56	5	91.1	5
5	6.32	5	0.55	5	91.4	5
6	6.34	5	0.61	5	90.4	5
7	6.34	5	0.53	5	91.6	5
8	6.41	5	0.65	5	89.8	5
9	6.43	5	0.68	5	89.4	5
10	6.37	5	0.68	5	89.3	5
11	6.35	4	1.20	4	81.2	4
12	6.35	5	1.35	5	78.7	5
13	6.32	5	1.27	5	79.9	5
14	6.30	5	1.48	5	76.6	5
15	6.29	4	1.46	4	76.8	4
16	6.41	2	1.80	2	71.9	2
17	6.42	5	1.69	5	73.7	5
18	6.39	5	1.31	5	79.5	5
19	6.41	5	1.23	5	80.9	5
20	6.43	5	1.07	5	83.3	5
21	6.47	5	1.23	5	81.1	5
22	6.45	5	1.15	5	82.1	5
23						
AVERAGE FOR THE DAY	6.36	23	0.99	23	84.4	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.99	461	1.40	550	76.6	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JULY 8, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0
    1       6.25     4    0.32    4    94.8    4
    2       6.27     5    0.43    5    93.1    5
    3       6.41     5    0.49    5    92.4    5
    4       6.33     5    0.48    5    92.5    5
    5       6.38     5    0.48    5    92.5    5
    6       6.43     5    0.54    5    91.6    5
    7       6.46     5    0.54    5    91.7    5
    8       6.54     5    0.79    5    87.9    5
    9       6.45     5    1.07    5    83.5    5
   10       6.34     5    0.85    5    86.6    5
   11       6.39     5    0.94    5    85.3    5
   12       6.34     5    1.04    5    83.5    5
   13  Data acquisition system down
   14       6.38     2    1.06    2    83.4    2
   15       6.41     5    1.14    5    82.2    5
   16       6.38     5    0.82    5    87.2    5
   17       6.35     4    0.90    4    85.8    4
   18       6.34     4    0.78    4    87.6    4
   19       6.30     6    0.79    6    87.5    6
   20       6.30     5    0.36    5    94.3    5
   21       6.57     5    0.37    5    94.4    5
   22       6.32     5    0.36    5    94.4    5
   23       6.34     5    0.36    5    94.4    5


 AVERAGE
 FOR THE    6.38    22    0.68   22    89.4   22 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY    6.00   483    1.36  552    77.4   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.47	5	0.37	5	94.3	5
2	6.59	5	0.39	5	94.1	5
3	6.56	5	0.39	5	94.1	5
4	6.53	5	0.41	5	93.7	5
5	6.55	5	0.39	5	94.1	5
6	6.57	5	0.37	5	94.3	5
7	6.62	5	0.39	5	94.0	5
8	6.55	4	0.37	4	94.4	4
9	6.59	4	0.52	4	92.1	4
10	6.49	5	0.69	5	89.4	5
11	6.38	5	0.69	5	89.1	5
12	6.32	5	0.63	5	90.0	5
13	**Data acquisition system down**					
14	6.23	3	0.68	3	89.1	3
15	6.78	1	0.87	1	86.3	1
16	**Daily span and zero**					
17	6.53	2	0.70	2	89.3	2
18	6.47	5	0.90	5	86.2	5
19	6.46	5	0.74	5	88.6	5
20	6.44	5	0.59	5	90.8	5
21	6.47	5	0.65	5	90.0	5
22	6.45	5	0.48	5	92.6	5
23	6.47	5	0.55	5	91.5	5
AVERAGE FOR THE DAY	6.48	21	0.56	21	91.6	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.02	504	1.32	550	78.1	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 10, 1981

HOUR	F(IN) LB.SO2 /MMBTU	NO. OF PTS	F(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.38	4	0.38	4	94.1	4
1	6.46	5	0.39	5	94.0	5
2	6.50	5	0.43	5	93.5	5
3	6.52	5	0.42	5	93.6	5
4	6.53	5	0.41	5	93.7	5
5	6.55	5	0.40	5	93.9	5
6	6.51	5	0.46	5	93.0	5
7	6.53	5	0.50	5	92.3	5
8	6.50	5	0.54	5	91.7	5
9	6.49	5	0.64	5	90.2	5
10	6.42	5	1.04	5	83.8	5
11	6.36	5	1.08	5	83.0	5
12	6.30	5	1.04	5	83.5	5
13	6.29	5	0.91	5	85.6	5
14	6.31	5	1.01	5	84.0	5
15	6.36	5	1.01	5	84.1	5
16	6.34	5	1.01	5	84.1	5
17	Data acquisition system down					
18	Daily span and zero					
19	6.39	2	1.05	2	83.5	2
20	6.43	5	1.01	5	84.3	5
21	6.43	5	1.18	5	81.6	5
22	6.48	5	1.25	5	80.7	5
23	6.47	5	1.27	5	80.3	5
AVERAGE FOR THE DAY	6.43	22	0.79	22	87.7	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.04	526	1.29	556	78.6	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JULY 11, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1       6.46     5    1.02    5    84.2    5
     2       6.57     5    0.97    5    85.2    5
     3       6.45     5    0.57    5    91.2    5
     4       6.52     5    0.48    5    92.7    5
     5       6.52     5    0.43    5    93.5    5
     6       6.53     5    0.58    5    91.2    5
     7       6.52     5    0.52    5    92.1    5
     8       6.57     5    0.79    5    88.0    5
     9       6.51     5    0.92    5    85.9    5
    10       6.41     3    0.99    3    84.6    3
    11       6.38     1    1.07    1    83.2    1
    12       6.38     5    1.05    5    83.5    5
    13       6.33     5    0.98    5    84.6    5
    14       6.34     5    0.97    5    84.6    5
    15       6.36     5    0.96    5    84.9    5
    16       6.33     4    0.91    4    85.6    4
    17   Daily span and zero
    18       6.17     4    0.95    4    84.5    4
    19       6.31     5    0.85    5    86.6    5
    20       6.38     5    0.57    5    91.0    5
    21       6.31     5    0.38    5    94.0    5
    22       6.38     5    0.41    5    93.6    5
    23       6.27     5    0.36    5    94.3    5

  AVERAGE
  FOR THE    6.41    22    0.76   22    88.4   21 HOURS OF MONITORING DATA
   DAY

  ROLLING
   30 DAY    6.06   548    1.27  568    79.1   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JULY 12, 1981

                 E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
                /MMBTU   PTS  /MMBTU  PTS    %     PTS

        0        6.35     5    0.36    5    94.3    5
        1        6.30     5    0.39    5    94.0    5
        2        6.28     5    0.56    5    91.1    5
        3        6.34     5    0.43    5    93.2    5
        4        6.27     5    0.42    5    93.3    5
        5
        6
        7        6.29     5    0.48    5    92.3    5
        8  Daily span and zero
        9        6.28     5    0.56    5    91.1    5
       10        6.30     5    0.57    5    90.9    5
       11        6.26     4    0.74    4    88.2    4
       12        5.39     1    0.89    1    83.5    1
       13        6.25     5    1.10    5    82.5    5
       14        6.29     5    1.10    5    82.5    5
       15        6.30     5    1.02    5    83.9    5
       16        6.31     5    0.97    5    84.6    5
       17        6.30     5    0.86    5    86.3    5
       18        6.26     5    0.77    5    87.7    5
       19        6.23     5    0.60    5    90.3    5
       20        6.29     5    0.52    5    91.8    5
       21        6.33     4    0.81    4    87.2    4
       22        6.34     4    1.00    4    84.2    4
       23        6.34     5    1.05    5    83.4    5

    AVERAGE
    FOR THE      6.25    21    0.72   21    88.6   20 HOURS OF MONITORING DATA
      DAY

    ROLLING
     30 DAY      6.08   559    1.24  565    79.7   23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
    AVERAGE
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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     JULY 13, 1981

            E(IN)  NO. E(OUT) NO. REDUC. NO.
  HOUR     LB.SO2  OF  LB.SO2  OF   EFF.  OF
           /MMBTU PTS /MMBTU  PTS    %    PTS

    0   Data acquisition system down
    1   Data acquisition system down
    2       6.37    3   1.09    3   83.0   3
    3       6.46    5   1.06    5   83.6   5
    4       6.43    5   1.13    5   82.4   5
    5       6.46    5   1.35    5   79.1   5
    6       6.41    5   1.36    5   78.8   5
    7       6.37    5   1.29    5   79.7   5
    8       6.39    5   1.14    5   82.1   5
    9       6.39    5   1.09    5   83.0   5
   10       6.28    5   0.90    5   85.6   5
   11       6.27    5   1.15    5   81.6   5
   12       6.26    5   1.18    5   81.1   5
   13       6.26    5   1.01    5   83.8   5
   14       6.31    5   0.81    5   87.2   5
   15       6.36    5   0.72    5   88.7   5
   16       6.34    4   0.79    4   87.6   4
   17       6.42    2   0.71    2   88.9   2
   18       6.40    5   0.81    5   87.3   5
   19       6.38    5   0.79    5   87.6   5
   20       6.39    6   0.81    6   87.3   6
   21       6.44    5   0.86    5   86.7   5
   22       6.44    4   0.84    4   86.9   4
   23       6.48    5   0.78    5   87.9   5

 AVERAGE
 FOR THE    6.38   22   0.99   22   84.5  22 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY    6.10  562   1.21  565   80.2  23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.50	5	0.75	5	88.4	5
1	6.54	5	0.75	5	88.5	5
2	6.49	1	0.71	1	89.1	1
3	Data acquisition system down					
4						
5						
6						
7						
8	6.44	1	0.51	1	92.0	1
9	6.41	5	0.67	5	89.6	5
10	6.35	5	0.67	5	89.4	5
11	6.60	5	0.80	5	87.9	5
12	6.27	5	0.72	5	88.5	5
13	6.25	5	0.60	5	90.4	5
14	6.28	5	0.59	5	90.6	5
15	6.33	5	0.62	5	90.3	5
16	6.35	2	0.51	2	91.9	2
17	6.34	5	0.54	5	91.5	5
18	6.30	5	0.64	5	89.9	5
19	6.32	5	0.61	5	90.4	5
20	6.37	5	0.55	5	91.4	5
21	6.32	5	0.53	5	91.6	5
22	6.31	5	0.54	5	91.4	5
23	6.36	5	0.58	5	91.0	5
AVERAGE FOR THE DAY	6.38	19	0.63	19	90.2	17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.11	564	1.17	565	80.9	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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              ADIPIC ACID DEMONSTRATION

                SCRUBBER MODULE S-1

                   JULY 15, 1981

          E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
 HOUR     LB.SO2 OF   LB.SO2 OF    EFF.   OF
          /MMBTU PTS  /MMBTU PTS    %     PTS

   0       6.24   5    0.28   5    95.5    5
   1       6.26   5    0.29   5    95.3    5
   2       6.21   5    0.27   5    95.6    5
   3       6.18   5    0.28   5    95.5    5
   4       6.08   5    0.27   5    95.5    5
   5       6.11   5    0.27   5    95.6    5
   6       6.25   5    0.38   5    94.0    5
   7       6.16   5    0.38   5    93.8    5
   8       6.33   5    0.39   5    93.9    5
   9       6.16   5    0.35   5    94.4    5
  10       6.11   5    0.62   5    89.8    5
  11       6.04   5    0.32   5    94.7    5
  12       5.91   5    0.38   5    93.6    5
  13       5.93   5    0.31   5    94.8    5
  14       5.96   4    0.29   4    95.1    4
  15       5.97   5    0.24   5    95.9    5
  16       6.02   5    0.24   5    96.0    5
  17       5.95   5    0.21   5    96.4    5
  18       5.99   5    0.20   5    96.7    5
  19       6.03   5    0.18   5    97.0    5
  20       6.06   5    0.21   5    96.6    5
  21       6.12   5    0.22   5    96.3    5
  22       6.15   5    0.21   5    96.6    5
  23       6.15   5    0.20   5    96.8    5


AVERAGE
FOR THE    6.10  24    0.29  24    95.2   24 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY    6.13, 565   1.11  566   82.0   23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 16, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.11	4	0.21	4	96.6	4	
1	6.23	5	0.20	5	96.8	5	
2	6.30	5	0.20	5	96.9	5	
3	6.38	5	0.20	5	96.9	5	
4	6.40	5	0.23	5	96.5	5	
5	6.30	5	0.27	5	95.7	5	
6	6.29	5	0.32	5	95.0	5	
7	6.18	5	0.36	5	94.1	5	
8	6.21	5	0.37	5	94.1	5	
9	6.18	5	0.34	5	94.5	5	
10	6.10	5	0.23	5	96.3	5	
11	6.04	3	0.22	3	96.3	3	
12	6.04	4	0.21	4	96.5	4	
13							
14							Scrubber down @ 1245
15							
16	5.94	5	0.28	5	95.2	5	Scrubber up @ 1550
17	6.01	4	0.28	4	95.3	4	
18	5.99	5	0.28	5	95.3	5	
19	5.97	5	0.32	5	94.7	5	
20	6.20	2	0.38	3	94.2	2	
21	6.19	5	0.38	5	93.8	5	
22	6.25	5	0.54	5	91.4	5	
23	6.36	2	0.61	2	90.4	2	
AVERAGE FOR THE DAY	6.18	21	0.31	21	95.1	21 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.13	567	1.04	568	83.0	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 17, 1981

HOUR	F(IN) LB.SO2 /MMBTU	NO. OF PTS	F(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10	6.07	2	0.34	2	94.4	2
11	5.92	5	0.33	5	94.4	5
12	5.82	5	0.33	5	94.3	5
13	5.92	5	0.35	5	94.1	5
14	5.95	5	0.36	5	94.0	5
15	5.95	5	0.38	5	93.7	5
16	5.96	4	0.30	4	94.9	4
17	6.02	4	0.34	4	94.4	4
18	5.94	2	0.42	2	93.0	2
19	5.92	5	0.38	5	93.5	5
20						
21	5.99	2	0.37	2	93.8	2
22	5.97	5	0.38	5	93.7	5
23	6.04	4	0.30	4	95.0	4
AVERAGE FOR THE DAY	5.96	13	0.35	13	94.1	13 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.14	558	0.99	559	83.8	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Scrubber down @ 2345

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                     JULY 18, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0              0    0.79    1            0      Scrubber down all day
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE            0    0.79    1           0 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   6.15   534    0.93  536   84.8  21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                      JULY 19, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0
     1             0             0            0     Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

 AVERAGE
 FOR THE           0             0
   DAY                                       0 HOURS OF MONITORING DATA

 ROLLING
  30 DAY
 AVERAGE    6.17  510   0.86   512   86.1  20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 20, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	5.37	1	0.23	1	95.8	1	
12	5.22	5	0.06	5	98.9	5	Scrubber up @ 1100
13	5.17	5	0.07	5	98.6	5	
14	5.10	5	0.09	5	98.3	5	
15	5.18	5	0.04	5	99.1	5	
16	5.08	5	0.04	5	99.2	5	
17	5.05	2	0.01	2	99.8	2	
18							
19	5.37	5	0.04	5	99.3	5	
20	5.35	5	0.02	4	99.7	4	
21	5.36	5	0.05	5	99.1	5	
22	5.37	5	0.07	5	98.7	5	
23	5.40	5	0.08	5	98.5	5	
AVERAGE FOR THE DAY	5.25	12	0.07	12	99.0	11 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.15	515	0.83	517	86.6	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 21, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.34	5	0.10	5	98.1	5
1	5.38	5	0.09	5	98.3	5
2	5.27	5	0.09	5	98.3	5
3	5.27	5	0.06	5	98.8	5
4	5.19	5	0.03	5	99.4	5
5	5.15	4	0.04	4	99.2	4
6	5.18	5	0.10	5	98.1	5
7	5.18	5	0.17	5	96.8	5
8	5.21	5	0.25	5	95.1	5
9	5.25	5	0.46	5	91.2	5
10	5.30	5	0.60	5	88.8	5
11	5.22	5	0.67	5	87.2	5
12	5.20	5	0.72	5	86.2	5
13	5.20	5	0.72	5	86.1	5
14	5.19	5	0.75	5	85.6	5
15	5.22	3	0.77	3	85.3	3
16	SO_2 stratification check					
17	Daily span and zero					
18	5.26	5	0.83	5	84.3	5
19	5.20	4	0.34	4	93.5	4
20	5.18	5	0.22	5	95.8	5
21	5.11	5	0.25	5	95.1	5
22	5.19	2	0.26	2	94.9	2
23	5.27	5	0.19	5	96.3	5
AVERAGE FOR THE DAY	5.23	22	0.35	22	93.3	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.11	537	0.81	539	86.8	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.24	5	0.27	5	94.9	5	
1	5.15	5	0.17	5	96.7	5	
2	5.01	6	0.08	6	98.4	6	
3	4.99	4	0.08	4	98.4	4	
4	5.05	5	0.09	5	98.3	5	
5	5.02	5	0.09	5	98.1	5	
6	5.06	5	0.13	5	97.4	5	
7	5.18	5	0.26	5	94.9	5	
8	5.17	5	0.57	5	88.9	5	
9	5.27	4	0.83	4	84.2	4	
10	**Data acquisition system down**						
11	5.71	2	0.93	2	83.7	2	
12	5.49	5	0.98	5	82.2	5	
13	5.26	5	1.00	5	80.9	5	
14	5.89	5	1.13	5	80.7	5	
15	5.74	3	1.19	1	80.7	1	
16	5.65	5	0.71	5	87.1	5	
17	6.22	1	0.58	5	90.9	1	
18		0	0.53	5		0	**Inlet O_2 monitor down**
19		0	0.54	5		0	**Inlet O_2 monitor down**
20		0	0.53	5		0	**Inlet O_2 monitor down**
21	5.39	5	0.51	5	90.5	5	
22	5.31	2	0.23	3	95.5	2	
23	5.27	4	0.21	4	96.1	4	
AVERAGE FOR THE DAY	5.35	20	0.51	23	91.5	18 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.09	557	0.79	562	86.9	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	**Data acquisition system down**					
1	**Data acquisition system down**					
2	5.35	3	0.07	3	98.6	3
3	5.33	5	0.07	5	98.6	5
4	5.43	5	0.07	5	98.7	5
5	5.39	5	0.09	5	98.3	5
6	5.47	5	0.10	5	98.1	5
7	5.59	5	0.38	5	93.3	5
8	5.35	5	0.28	5	94.9	5
9	5.49	5	0.73	5	86.7	5
10	5.47	5	0.84	5	84.7	5
11	5.47	5	0.97	5	82.4	5
12	5.53	5	1.11	5	79.9	5
13	5.62	5	1.15	5	79.5	5
14	5.63	5	1.16	5	79.5	5
15	5.63	2	1.08	2	80.8	2
16	5.83	4	1.02	4	82.5	4
17	5.84	5	0.91	5	84.5	5
18	5.81	5	0.95	5	83.6	5
19	5.80	5	0.99	5	82.9	5
20	5.83	5	0.94	5	83.8	5
21	5.84	5	0.88	5	84.9	5
22	5.96	5	0.88	5	85.3	5
23	5.98	5	0.44	5	92.6	5
AVERAGE FOR THE DAY	5.62	22	0.69	22	87.9	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.07	576	0.79	581	87.0	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.88	5	0.29	5	95.0	5
1	5.95	6	0.23	6	96.1	6
2	5.96	5	0.15	5	97.5	5
3	5.95	5	0.15	5	97.5	5
4	5.92	5	0.14	5	97.6	5
5	5.89	5	0.17	5	97.1	5
6	5.91	4	0.19	4	96.9	4
7	5.97	5	0.15	5	97.4	5
8	5.97	5	0.34	5	94.3	5
9	6.14	5	1.15	5	81.3	5
10	6.08	5	1.31	5	78.4	5
11	6.27	5	1.37	5	77.9	5
12	6.05	5	1.39	5	77.1	5
13	5.99	5	1.38	5	77.0	5
14	5.99	4	1.27	4	78.7	4
15	Daily span and zero					
16	O_2 monitor calibration check					
17						
18						
19	6.03	2	1.29	2	78.7	2
20	5.96	4	1.25	4	79.1	4
21	Data acquisition system down					
22	Data acquisition system down					
23	Data acquisition system down					
AVERAGE FOR THE DAY	6.00	17	0.72	17	88.1	17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.08	572	0.75	577	87.6	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                         JULY 25, 1981

            F(IN)  NO. F(OUT) NO. REDUC. NO.
  HOUR     LB.SO2 OF  LB.SO2 OF    EFF.  OF
           /MMBTU PTS /MMBTU PTS    %    PTS

    0   Data acquisition system down
    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12       6.03   2    1.02   2    83.1   2
   13       6.02   3    1.00   3    83.5   3
   14       5.98   5    0.99   5    83.5   5
   15       5.98   2    0.96   2    83.9   2
   16       5.96   3    0.88   3    85.2   3
   17       5.91   3    0.83   3    86.0   3
   18   Data acquisition system down
   19
   20
   21       6.01   1    0.95   1    84.2   1
   22       5.71   3    0.69   3    88.0   3
   23       6.12   5    0.58   5    90.5   5

AVERAGE
FOR THE     5.97   9    0.88   9    85.4   8 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     6.09  559   0.73  564   88.1  21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 26, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.09	5	0.28	5	95.4	5	
1	6.16	5	0.20	5	96.8	5	
2	6.18	5	0.19	5	97.0	5	
3	6.18	5	0.21	5	96.5	5	
4	6.17	5	0.25	5	95.9	5	
5	6.12	5	0.23	5	96.3	5	
6	6.11	5	0.24	5	96.1	5	
7	6.12	5	0.25	5	95.9	5	
8	6.11	5	0.53	5	91.4	5	
9	5.98	5	0.95	5	84.0	5	
10	6.11	5	1.05	5	82.9	5	
11	6.13	5	1.08	5	82.3	5	
12	6.10	5	1.07	5	82.5	5	
13	6.11	3	1.10	3	82.0	3	
14	Daily span and zero						
15	6.03	3	1.01	3	83.2	3	
16	6.04	5	1.01	5	83.3	5	
17	6.05	5	1.00	5	83.5	5	
18	6.07	5	1.00	5	83.5	5	
19	6.09	5	1.02	5	83.2	5	
20	6.14	5	1.03	5	83.2	5	
21	6.14	5	1.01	5	83.6	5	
22	6.11	5	1.04	5	83.0	5	
23	6.08	5	1.21	5	80.2	5	
AVERAGE FOR THE DAY	6.11	23	0.74	23	87.9	23 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.10	562	0.72	567	88.1	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

JULY 27, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.20	5	0.57	5	90.9	5	
1	6.14	5	0.24	5	96.1	5	
2	5.95	5	0.20	5	96.7	5	
3	6.08	5	0.21	5	96.5	5	
4	6.11	4	0.19	4	96.9	4	
5	6.11	5	0.21	5	96.6	5	
6	6.20	5	0.22	5	96.4	5	
7	6.17	5	0.87	5	85.9	5	
8	6.14	3	1.08	3	82.3	3	
9	Data acquisition system down						
10	Data acquisition system down						
11	6.11	3	0.96	3	84.2	3	
12	6.08	5	0.90	5	85.2	5	
13	6.02	2	1.03	2	82.9	2	
14	Data acquisition system down						
15							
16							
17							
18							
19							
20							
21							
22							
23							
AVERAGE FOR THE DAY	6.11	12	0.56	12	90.9		12 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.11	552	0.72	557	88.3		20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                         JULY 28. 1981

           E(IN)  NO. E(OUT) NO. REDUC. NO.
   HOUR   LB.SO2 OF  LB.SO2 OF   EFF.  OF
          /MMBTU PTS /MMBTU PTS   %    PTS

     0
     1            0          0         0     Data acquisition system down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13                                       Scrubber down @ 1355
    14                                       Scrubber up @ 1840
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE          0          0         0 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   6.12  528  0.72  533  88.2  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                          JULY 29, 1981

              E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2  OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0    Data acquisition system down
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18    Daily span and zero
    19        5.95    4    0.83    4    86.0    4
    20        5.92    5    0.82    5    86.1    5
    21        5.91    2    0.81    2    86.3    2
    22        5.97    5    0.79    5    86.7    5
    23

  AVERAGE
  FOR THE     5.94    4    0.81    4    86.3    4 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY     6.13  509    0.74  514    87.9   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                     JULY 30, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1     6.05     3    0.73    3    88.0    3
     2     6.05     1    0.72    1    88.0    1
     3     6.05     4    0.22    4    96.4    4
     4     6.08     3    0.24    3    96.1    3
     5  Data acquisition system down
     6
     7
     8
     9
    10     5.97     4    1.22    4    79.5    4
    11     5.83     6    1.18    6    79.8    6
    12     5.99     5    1.12    5    81.3    5
    13     5.84     5    1.14    5    80.6    5
    14     5.74     5    1.07    5    81.4    5
    15
    16     5.77     2    0.79    2    86.3    2
    17     5.89     5    0.75    5    87.3    5
    18     5.96     5    0.69    5    88.4    5
    19     5.83     5    0.69    5    88.2    5
    20     5.85     5    0.74    5    87.3    5
    21     5.93     5    0.69    5    88.3    5
    22     5.94     5    0.67    5    88.8    5
    23     5.99     5    0.61    5    89.8    5

 AVERAGE
 FOR THE   5.93    17    0.78   17    86.7  16 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.12   503    0.75  508    87.8  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                       JULY 31, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

    0      5.97    4     0.64    4    89.2    4
    1      5.94    5     0.62    5    89.6    5
    2      6.00    5     0.63    5    89.5    5
    3      6.13    5     0.75    5    87.8    5
    4      5.90    5     1.03    5    82.6    5
    5      5.95    5     1.77    5    70.3    5
    6
    7
    8      6.16    1     0.60    1    90.3    1
    9      6.02    5     0.54    5    91.1    5
   10      5.96    5     0.57    5    90.4    5
   11      5.92    5     0.55    5    90.7    5
   12      5.93    5     0.56    5    90.6    5
   13      5.80    5     0.77    5    86.7    5
   14      5.77    5     0.82    5    85.8    5
   15      5.66    5     0.71    5    87.4    5
   16      5.92    4     0.65    4    89.0    4
   17      5.49    2     0.65    2    88.1    2
   18      5.42    5     0.62    5    88.6    5
   19      5.40    5     0.56    5    89.6    5
   20      5.45    5     0.43    4    92.1    4
   21      5.36    5     0.30    5    94.4    5
   22      5.32    6     0.31    6    94.1    6
   23      5.28    5     0.13    5    97.5    5

AVERAGE
FOR THE    5.76   22     0.65   22    88.8   21 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.10  505     0.74  510    87.8   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                      AUGUST 1, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0      5.27     5    0.04    5    99.2    5
     1      5.25     5    0.05    5    99.1    5
     2      5.07     5    0.04    5    99.2    5
     3      5.14     5    0.04    5    99.2    5
     4      5.12     5    0.04    5    99.3    5
     5      5.07     5    0.03    5    99.4    5
     6      5.13     5    0.04    5    99.2    5
     7      5.18     5    0.05    5    99.1    5
     8      5.12     5    0.04    5    99.3    5
     9      5.10     5    0.08    5    98.4    5
    10      5.18     5    0.52    5    89.9    5
    11      5.12     5    0.56    5    89.1    5
    12      5.09     5    0.51    5    89.9    5
    13      5.08     5    0.46    5    90.9    5
    14      5.05     5    0.40    5    92.1    5
    15      5.03     5    0.35    5    93.1    5
    16      5.06     5    0.40    5    92.1    5
    17      5.06     5    0.42    5    91.7    5
    18      5.14     5    0.42    5    91.9    5
    19      5.19     5    0.45    5    91.3    5
    20      5.28     5    0.45    5    91.4    5
    21      5.36     3    0.49    3    90.8    3
    22
    23      5.54     5    0.42    5    92.4    5

 AVERAGE
 FOR THE    5.16    23    0.27   23    94.7   23 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.04   506    0.69  511    88.5   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                        AUGUST 2, 1981

              E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2  OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0        5.48    5    0.39    5    93.0    5
     1        5.56    5    0.37    5    93.3    5
     2        5.54    5    0.34    5    93.9    5
     3        5.58    5    0.25    5    95.5    5
     4        5.55    5    0.16    5    97.2    5
     5        5.56    5    0.10    5    98.2    5
     6        5.63    5    0.42    5    92.5    5
     7        5.61    5    0.56    5    90.0    5
     8        5.55    5    0.53    5    90.5    5
     9        5.39    4    0.56    4    89.7    4
    10        5.40    5    0.59    5    89.1    5
    11        5.60    5    0.61    5    89.1    5
    12        5.49    5    0.58    5    89.4    5
    13        4.80    2    0.60    2    87.4    2
    14        5.36    5    0.59    5    88.9    5
    15        5.33    3    0.54    3    89.9    3
    16        5.33    4    0.57    4    89.3    4
    17        5.14    5    0.56    5    89.0    5
    18        5.27    6    0.61    6    88.5    6
    19        5.44    5    0.78    5    85.7    5
    20        5.48    5    0.61    5    88.9    5
    21        5.39    5    0.54    5    90.0    5
    22        5.52    5    0.55    5    90.0    5
    23        5.39    5    0.32    5    94.1    5

AVERAGE
FOR THE       5.43   24    0.49   24    91.0  24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY       6.00  515    0.67  519    88.9  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                      AUGUST 3, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

    0      5.50    5    0.07    5     98.7    5
    1      5.48    5    0.17    5     96.8    5
    2      5.42    5    0.10    5     98.2    5
    3      5.43    5    0.07    5     98.6    5
    4      5.43    5    0.07    5     98.7    5
    5      5.48    5    0.74    5     86.4    5
    6      5.48    5    0.71    5     87.0    5
    7      5.49    5    0.73    5     86.7    5
    8      5.53    5    0.72    5     87.0    5
    9      5.36    5    0.75    5     86.0    5
   10      5.47    5    0.67    5     87.8    5
   11      5.45    5    0.65    5     88.1    5
   12      5.53    5    0.79    5     85.7    5
   13      5.57    5    0.77    5     86.2    5
   14      5.57    5    0.78    5     86.1    5
   15      5.52    5    0.76    5     86.3    5
   16      5.61    5    0.80    5     85.7    5
   17      5.60    5    0.79    5     85.9    5
   18      5.63    3    0.76    3     86.4    3
   19      5.67    5    0.76    5     86.7    5
   20      5.65    5    0.72    5     87.2    5
   21      5.64    5    0.68    5     87.9    5
   22      5.66    5    0.69    5     87.8    5
   23      5.62    5    0.67    5     88.0    5

 AVERAGE
 FOR THE   5.53   24    0.60   24     89.2  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.98  526    0.66  530     89.0  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.62	5	0.70	5	87.5	5
1	5.65	4	0.75	4	86.6	4
2	5.64	5	0.76	5	86.6	5
3	5.60	5	0.74	5	86.8	5
4	5.61	4	0.72	4	87.2	4
5	5.61	5	0.68	5	88.0	5
6	5.58	5	0.70	5	87.4	5
7	5.59	4	0.68	4	87.8	4
8	5.57	5	0.64	5	88.6	5
9	5.57	2	1.10	5	80.3	2
10	Scrubber down @ 0930 ↓					
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	5.60	10	0.73	11	87.7	10 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.96	512	0.64	517	89.3	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	**Scrubber up @ 0010**					
1	6.18	5	0.95	3	84.7	3
2	6.27	2	1.01	2	83.9	2
3	6.30	4	1.04	4	83.5	4
4	6.24	5	0.99	5	84.1	5
5	6.09	5	0.87	5	85.8	5
6	6.02	5	0.92	5	84.8	5
7	5.96	5	0.88	5	85.3	5
8	5.90	5	0.89	5	84.9	5
9	5.92	4	0.97	4	83.5	4
10	5.86	2	0.96	2	83.7	2
11	5.83	4	0.93	4	84.1	4
12	5.93	5	0.89	5	84.9	5
13	5.85	5	0.95	5	83.8	5
14	5.87	7	1.28	7	78.2	7
15	**Daily span and zero**					
16	**SO_2 monitor calibration**					
17						
18	5.84	3	0.99	3	83.0	3
19	5.78	5	1.02	5	82.4	5
20	5.83	5	1.12	5	80.8	5
21	5.89	5	1.20	5	79.6	5
22	5.92	5	1.19	5	80.0	5
23	5.90	2	1.19	2	79.8	2
AVERAGE FOR THE DAY	5.97	20	1.01	20	83.0	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.95	511	0.62	516	89.5	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                    AUGUST 6, 1981

          E(IN)   NO. E(OUT)  NO. REDUC. NO.
  HOUR   LB.SO2   OF  LB.SO2  OF   EFF.  OF
         /MMBTU  PTS  /MMBTU PTS    %    PTS

   0      5.34    4    1.12   4   78.0   4
   1      5.76    5    1.06   5   81.7   5
   2      5.72    5    1.03   5   82.0   5
   3      5.72    5    1.01   5   82.3   5
   4      5.78    5    1.08   5   81.3   5
   5      5.79    5    1.10   5   81.0   5
   6      5.75    5    1.12   5   80.6   5
   7      5.76    5    1.01   5   82.5   5
   8      5.77    3    0.94   4   83.5   3
   9      5.76    5    1.01   5   82.6   5
  10      5.67    5    0.61   5   89.3   5
  11      5.67    5    0.46   5   91.9   5
  12      5.68    5    0.51   5   91.1   5
  13      5.70    5    0.61   5   89.4   5
  14      5.67    5    0.67   5   88.1   5
  15      5.61    5    0.82   5   85.4   5
  16      5.58    2    0.74   2   86.8   2
  17      5.74    5    0.47   5   91.8   5
  18      5.73    6    0.47   6   91.8   6
  19      5.67    4    0.60   4   89.4   4
  20      5.66    5    0.51   5   91.0   5
  21      5.66    5    0.42   5   92.5   5
  22      5.65    5    0.37   5   93.5   5
  23      5.68    5    0.36   5   93.7   5


AVERAGE
FOR THE   5.69   24   '0.75  24   86.7  24 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   5.91  512    0.61 517   89.6  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                      AUGUST 7, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0       5.72     4    0.39    4    93.2    4
    1       5.53     5    0.32    5    94.3    5
    2       5.56     5    0.24    5    95.6    5
    3       5.50     5    0.15    5    97.3    5
    4       5.50     5    0.08    5    98.5    5
    5       5.50     5    0.08    5    98.5    5
    6       5.56     5    0.23    5    95.8    5
    7       5.68     5    0.24    5    95.8    5
    8       5.76     5    0.41    5    92.9    5
    9       5.73     4    0.38    4    93.3    4
   10       5.69     5    0.33    5    94.2    5
   11       5.64     5    0.47    5    91.7    5
   12       5.60     5    0.49    5    91.3    5
   13       5.62     4    0.77    4    86.2    4
   14       5.63     5    0.67    5    88.2    5
   15       5.63     5    0.57    5    89.8    5
   16       5.67     4    0.51    4    91.0    4
   17                0    0.55    4            0
   18       5.79     3    0.55    3    90.4    3
   19       5.80     4    0.60    4    89.7    4
   20       5.76     5    0.63    5    89.0    5
   21       5.65     5    0.43    5    92.4    5
   22
   23       5.56     6    0.46    6    91.6    6

AVERAGE
FOR THE     5.64    22    0.42   23    92.8   22 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     5.88   512    0.60  518    89.8   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                         AUGUST 8, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0       5.61    5    0.18    5    96.8    5
     1       5.54    5    0.10    5    98.2    5
     2       5.55    5    0.11    5    98.0    5
     3       5.62    5    0.12    5    97.9    5
     4       5.61    5    0.09    5    98.4    5
     5       5.58    5    0.12    5    97.8    5
     6       5.60    5    0.13    5    97.6    5
     7       5.61    5    0.13    5    97.6    5
     8       5.65    5    0.14    5    97.5    5
     9       5.62    5    0.15    5    97.3    5
    10       5.62    4    0.16    4    97.2    4
    11       5.63    5    0.22    5    96.1    5
    12       5.64    5    0.30    5    94.6    5
    13       5.64    5    0.21    5    96.3    5
    14       5.70    5    0.35    5    93.9    5
    15       5.64    5    0.43    5    92.4    5
    16       5.63    6    0.53    6    90.6    6
    17   Daily span and zero
    18       5.58    2    0.45    2    92.0    2
    19       5.67    4    0.43    4    92.5    4
    20   SO2 stratification check
    21       5.62    4    0.42    4    92.5    4
    22       5.64    4    0.47    4    91.6    4
    23

 AVERAGE
 FOR THE     5.62   21    0.25   21    95.6   21 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     5.85  512    0.59  518    89.9   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                     AUGUST 9, 1981

          E(IN)  NO. E(OUT) NO. REDUC. NO.
   HOUR   LB.SO2 OF  LB.SO2 OF   EFF.  OF
          /MMBTU PTS /MMBTU PTS   %    PTS

     0
     1
     2
     3
     4
     5
     6
     7
     8
     9     5.75   3   0.14   3   97.6   3
    10     5.61   4   0.18   1   96.8   1
    11     5.60   5   0.31   4   94.5   4
    12     5.63   5   0.47   5   91.7   5
    13     5.60   4   0.46   4   91.8   4
    14
    15     5.65   5   0.74   5   86.8   5
    16     5.70   5   1.07   5   81.2   5
    17     5.63   5   0.91   5   83.9   5
    18     5.72   4   1.19   4   79.2   4
    19     5.74   5   1.12   5   80.5   5
    20     5.75   5   1.01   5   82.5   5
    21     5.83   5   0.74   5   87.4   5
    22     5.83   5   0.95   5   83.7   5
    23     5.88   5   0.66   5   88.7   5

 AVERAGE
 FOR THE   5.71  14   0.71  14   86.9  13 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.82 504   0.58 510   90.0  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                      AUGUST 10, 1981

             E(IN)   NO. E(OUT)  NO. REDUC. NO.
   HOUR      LB.SO2  OF  LB.SO2  OF   EFF.  OF
             /MMBTU PTS /MMBTU  PTS    %    PTS

     0        5.86   4    0.16   4    97.3   4
     1        5.86   4    0.08   4    98.7   4
     2        5.87   5    0.07   5    98.8   5
     3        5.92   5    0.08   5    98.7   5
     4        5.91   5    0.07   5    98.8   5
     5        5.89   5    0.07   5    98.7   5
     6        5.85   5    0.09   5    98.4   5
     7        5.79   5    0.21   5    96.3   5
     8        5.92   4    0.29   4    95.0   4
     9        5.86   4    0.42   4    92.8   4
    10        5.88   5    0.56   5    90.4   5
    11        5.86   5    0.64   5    89.1   5
    12        5.86   5    0.68   5    88.4   5
    13        5.91   5    0.81   5    86.3   5
    14        5.97   5    0.77   5    87.1   5
    15        6.03   2    0.55   2    90.8   2
    16        5.96   4    0.65   4    89.1   4
    17        5.93   5    0.75   5    87.4   5
    18        5.99   2    0.75   2    87.5   2
    19        5.95   5    0.49   5    91.9   5
    20        6.03   5    0.43   5    92.9   5
    21        6.07   4    0.40   4    93.5   4
    22        6.07   5    0.33   5    94.6   5
    23        6.06   5    0.29   5    95.1   5

 AVERAGE
 FOR THE      5.93  24    0.40  24    93.2  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY      5.80 506    0.57 512    90.2  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                       AUGUST 11, 1981

           F(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0     6.22     5    0.18    5    97.2    5
     1     5.87     5    0.05    5    99.1    5
     2     5.94     5    0.06    5    99.0    5
     3     5.98     5    0.07    5    98.8    5
     4     5.99     5    0.07    5    98.8    5
     5     5.99     5    0.14    5    97.7    5
     6     6.22     5    0.07    5    99.0    5
     7     6.07     4    0.09    4    98.5    4
     8     6.24     5    0.46    5    92.6    5
     9     6.25     5    0.61    5    90.2    5
    10     6.18     5    0.51    5    91.7    5
    11  Daily span and zero
    12     6.23     5    0.44    5    92.9    5
    13     6.29     5    0.40    5    93.6    5
    14     6.31     5    0.40    5    93.7    5
    15     6.29     5    0.40    5    93.6    5
    16     6.24     4    0.37    4    94.0    4
    17     6.20     5    0.38    5    93.8    5
    18     6.20     5    0.38    5    93.9    5
    19     6.23     2    0.33    2    94.8    2
    20     6.17     5    0.30    5    95.1    5
    21     6.20     5    0.35    5    94.4    5
    22     6.14     2    0.34    5    93.7    2
    23

 AVERAGE
 FOR THE   6.16    22    0.29   22    95.3   22 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.79   507    0.55  513    93.5   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                         AUGUST 12, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR    LB.SO2   OF   LB.SO2   OF    EFF.   OF
            /MMBTU   PTS  /MMBTU   PTS    %     PTS
```

Data acquisition system down

Inlet SO_2 monitor down

```
      0
      1
      2
      3
      4                0    0.06    1             0
      5                0    0.07    5             0
      6                0    0.10    5             0
      7                0    0.06    5             0
      8                0    0.08    5             0
      9                0    0.28    3             0
     10
     11                0    0.34    4             0
     12                0    0.41    1             0
     13
     14
     15
     16                0    0.48    1             0
     17
     18
     19
     20
     21
     22
     23

  AVERAGE
  FOR THE              0    0.21    9            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY     5.77   485    0.52  500   90.9  16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                     ADIPIC ACID DEMONSTRATION

                        SCRUBBER MODULE S-1

                          AUGUST 13, 1981

              E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
    HOUR     LB.SO2  OF   LB.SO2  OF   EFF.    OF
             /MMBTU  PTS  /MMBTU  PTS   %      PTS

      0   Data acquisition system down
      1
      2
      3
      4
      5
      6
      7
      8
      9
     10
     11
     12       5.82    5    0.42    5    92.9    5
     13       5.75    4    0.40    4    93.0    4
     14       5.86    2    0.39    2    93.4    2
     15       5.84    5    0.39    5    93.3    5
     16       5.83    5    0.39    5    93.3    5
     17       5.86    5    0.39    5    93.4    5
     18       5.87    5    0.40    5    93.1    5
     19       5.82    5    0.40    5    93.2    5
     20       5.84    5    0.36    5    93.9    5
     21       5.84    5    0.35    5    94.0    5
     22       5.84    5    0.34    5    94.1    5
     23       5.77    5    0.31    5    94.6    5

  AVERAGE
  FOR THE     5.83   12    0.38   12    93.5   12 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY     5.75  478    0.52  493    91.0   16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.76	2	0.04	2	99.4	2	
1	5.72	5	0.04	5	99.3	5	
2	5.77	5	0.04	5	99.3	5	
3	5.78	5	0.04	5	99.4	5	
4	5.76	5	0.03	5	99.5	5	
5	5.76	5	0.05	5	99.2	5	
6	5.69	5	0.04	5	99.3	5	
7	5.61	5	0.03	5	99.4	5	
8	5.59	5	0.03	5	99.4	5	
9	5.72	5	0.04	5	99.4	5	
10	5.64	5	0.04	5	99.3	5	
11	5.73	5	0.29	5	94.9	5	
12	5.75	5	0.30	5	94.8	5	
13	5.79	5	0.31	5	94.6	5	
14	5.87	5	0.29	5	95.1	5	
15	5.89	5	0.30	5	94.9	5	
16	5.93	1	0.27	1	95.5	1	
17	6.08	3	0.35	3	94.2	3	
18	**Daily span and zero**						
19	6.10	4	0.36	4	94.1	4	
20	6.13	1	0.31	1	95.0	1	
21	6.18	5	0.34	5	94.5	5	
22	6.17	5	0.16	5	97.3	5	
23	6.10	5	0.05	5	99.2	5	
AVERAGE FOR THE DAY	5.85	23	0.16	23	97.5		21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.73	477	0.51	482	91.1		16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
            ADIPIC ACID DEMONSTRATION

              SCRUBBER MODULE S-1

                AUGUST 15, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS, /MMBTU  PTS    %     PTS

    0       6.13    5    0.13    5    97.8    5
    1       6.11    5    0.27    5    95.6    5
    2       6.06    5    0.26    5    95.7    5
    3       6.06    5    0.23    5    96.2    5
    4       6.02    5    0.18    5    96.9    5
    5
    6       6.02    5    0.18    5    96.9    5
    7       6.03    5    0.18    5    97.1    5
    8       5.97    5    0.17    5    97.2    5
    9       5.93    5    0.13    5    97.8    5
   10       5.88    5    0.08    5    98.5    5
   11       5.86    5    0.13    5    97.7    5
   12       5.82    2    0.12    2    98.0    2
   13       5.82    5    0.15    5    97.4    5
   14       5.81    5    0.10    5    98.3    5
   15       5.84    5    0.04    2    99.4    2
   16       5.82    5            0            0
   17       5.79    5            0            0
   18       5.78    5            0            0
   19       5.84    5            0            0
   20       5.81    5            0            0
   21       5.78    5            0            0
   22       5.71    5            0            0
   23       5.74    5            0            0

 AVERAGE
 FOR THE    5.90   93    0.16   15    97.4   15 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    5.72  479    0.51  486    91.1   15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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Outlet SO_2 monitor down

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                         AUGUST 16, 1981

            E(IN)  NO. E(OUT) NO. REDUC. NO.
 HOUR      LB.SO2 OF  LB.SO2 OF    EFF.  OF
           /MMBTU PTS /MMBTU PTS    %    PTS

   0        5.77   4    0.14   2   97.6   2
   1        5.91   3    0.13   4   97.5   3
   2        5.93   3    0.16   3   97.4   3
   3        5.92   5    0.18   5   97.0   5
   4        5.93   5    0.17   5   97.1   5
   5        5.88   5    0.16   5   97.3   5
   6        5.93   5    0.15   5   97.5   5
   7        5.91   5    0.15   5   97.5   5
   8        5.90   5    0.14   5   97.6   5
   9        5.90   5    0.11   5   98.1   5
  10        5.92   3    0.21   4   95.6   5
  11        5.99   5    0.13   5   97.8   3
  12        5.96   5    0.05   5   99.1   5
  13        5.98   5    0.00   5   99.9   5
  14        5.97   5    0.02   5   99.7   5
  15        6.01   5    0.04   5   99.3   5
  16        5.99   5    0.07   5   98.9   5
  17        6.00   5    0.06   5   99.0   5
  18        6.01   5    0.06   5   99.0   5
  19        6.03   5    0.06   5   99.0   5
  20        5.99   5    0.05   5   99.1   5
  21        5.98   5    0.12   5   98.1   5
  22        6.01   5    0.26   5   95.6   5
  23        5.99   5    0.40   5   93.2   5

AVERAGE
FOR THE     5.95  24    0.13  24   97.8  24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY
AVERAGE     5.73  490   0.49  497  91.4  16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.01	5	0.44	5	92.7	5
1	6.04	5	0.28	5	95.4	5
2	6.00	5	0.20	5	96.7	5
3	6.00	5	0.23	5	96.2	5
4	6.02	5	0.23	5	96.2	5
5	6.06	5	0.29	5	95.2	5
6	6.04	5	0.28	5	95.4	5
7	6.07	5	0.29	5	95.2	5
8	6.09	5	0.27	5	95.5	5
9	6.10	5	0.21	5	96.6	5
10	6.02	4	0.13	4	97.9	4
11	5.99	1	0.10	1	98.4	1
12	6.22	5	0.06	5	99.1	5
13	6.20	5	0.15	5	97.6	5
14	6.09	2	0.14	2	97.7	2
15	**Data acquisition system down**					
16	**Data acquisition system down**					
17	**Data acquisition system down**					
18	5.95	3	0.22	3	96.4	3
19	5.89	5	0.19	5	96.8	5
20	5.85	5	0.20	5	96.6	5
21	**Daily span and zero**					
22	5.92	3	0.16	3	97.3	3
23	5.93	5	0.19	5	96.8	5
AVERAGE FOR THE DAY	6.02	20	0.21	20	96.4	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.74	510	0.48	516	91.6	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                     AUGUST 18, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS     %     PTS

   0      5.78    5    0.09    5    98.4    5
   1      5.79    5    0.05    5    99.2    5
   2      5.77    5    0.06    5    98.9    5
   3      5.83    5    0.07    5    98.8    5
   4      5.76    5    0.07    5    98.8    5
   5      5.80    5    0.10    5    98.3    5
   6      5.81    5    0.17    5    97.2    5
   7      5.80    5    0.23    5    96.0    5
   8      5.83    5    0.24    5    95.9    5
   9      5.88    4    0.32    4    94.6    4
  10   Daily span and zero
  11      5.82    3    0.46    3    92.1    3
  12      5.81    5    0.36    5    93.7    5
  13      5.71    5    0.47    4    91.8    4
  14   Outlet SO2 monitor down
  15      5.84    3    0.61    3    89.6    3
  16      5.79    5    0.44    4    92.5    4
  17      5.83    5    0.39    5    93.4    5
  18      5.89    5    0.39    5    93.3    5
  19      5.88    4    0.40    4    93.2    4
  20      5.91    2    0.39    2    93.4    2
  21      5.86    5    0.46    5    92.1    5
  22      5.82    5    0.24    5    95.9    5
  23      5.87    5    0.09    5    98.5    5

AVERAGE
FOR THE   5.82   22    0.28   22    95.3   22 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   5.74  532    0.47  538    91.7   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                   ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                        AUGUST 19, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %     PTS

    0        5.72    5    0.10    5    98.3    5
    1        5.72    5    0.13    5    97.7    5
    2        5.78    5    0.04    5    99.2    5
    3        5.70    5    0.04    5    99.2    5
    4        5.71    5    0.05    5    99.2    5
    5        5.68    5    0.04    5    99.3    5
    6        5.74    5    0.06    5    99.0    5
    7        5.74    5    0.05    5    99.1    5
    8        5.82    5    0.08    5    98.6    5
    9        5.80    5    0.16    5    97.3    5
   10        5.78    5    0.26    5    95.5    5
   11        5.80    5    0.28    5    95.2    5
   12        5.84    5    0.38    5    93.5    5
   13        5.74    3    0.46    3    92.0    3
   14     Zero drift test on O2 monitors
   15     Zero drift test on O2 monitors
   16     Zero drift test on O2 monitors
   17        5.71    3    0.59    3    89.7    3
   18        5.83    4    0.52    4    91.1    4
   19        5.84    5    0.52    5    91.0    5
   20        5.79    5    0.51    5    91.1    5
   21        5.82    5    0.51    5    91.2    5
   22        5.82    5    0.51    5    91.2    5
   23        5.82    5    0.52    5    91.1    5

AVERAGE
FOR THE     .5.77   21    0.28   21    95.2   21 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY      5.75  541    0.48  547    91.7   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                     AUGUST 20, 1981

  HOUR    E(IN)   NO. E(OUT)  NO. REDUC. NO.
          LB.SO2  OF  LB.SO2  OF   EFF.  OF
          /MMBTU PTS /MMBTU  PTS    %    PTS

    0      5.81    5   0.10    5   98.2   5
    1      5.87    5   0.11    5   98.0   5
    2      5.73    5   0.11    5   98.1   5
    3      5.74    5   0.11    5   98.0   5
    4      5.81    5   0.11    5   98.1   5
    5      5.81    5   0.09    5   98.4   5
    6      5.82    5   0.11    5   98.0   5
    7      5.81    5   0.38    5   93.5   5
    8      5.82    5   0.35    5   93.9   5
    9      5.83    5   0.33    5   94.3   5
   10      5.82    3   0.34    3   94.2   3
   11      5.78    4   0.28    4   95.1   4
   12      5.77    5   0.26    5   95.6   5
   13      5.86    5   0.26    5   95.5   5
   14      5.78    5   0.22    5   96.1   5
   15      5.61    2   0.20    2   96.4   2
   16      5.75    5   0.21    5   96.3   5
   17      5.77    5   0.21    5   96.3   5
   18      5.77    5   0.20    5   96.5   5
   19      5.84    5   0.19    5   96.7   5
   20      5.84    5   0.22    5   96.3   5
   21      5.81    5   0.24    5   95.8   5
   22      5.82    5   0.22    5   96.1   5
   23      5.91    5   0.24    5   96.0   5

 AVERAGE
 FOR THE   5.80   24   0.21   24   96.3  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.78  543   0.47  549   91.9  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                        AUGUST 21, 1981

             E(IN)   NO. E(OUT)  NO. REDUC.  NO.
   HOUR     LB.SO2   OF  LB.SO2  OF   EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS   %     PTS

     0       5.89    5    0.23    5   96.1    5
     1       5.89    5    0.22    5   96.3    5
     2       5.85    5    0.17    5   97.2    5
     3       5.84    5    0.15    5   97.4    5
     4       5.79    5    0.14    5   97.6    5
     5       5.83    5    0.10    5   98.3    5
     6       5.83    5    0.16    5   97.3    5
     7       5.82    5    0.18    5   96.9    5
     8       5.83    5    0.18    5   96.9    5
     9       5.82    5    0.18    5   96.9    5
    10       5.79    5    0.17    5   97.0    5
    11       5.80    5    0.18    5   97.0    5
    12       5.77    5    0.18    5   96.8    5
    13       5.83    5    0.18    5   96.9    5
    14       5.85    5    0.20    5   96.6    5
    15       5.87    3    0.16    3   97.2    3
    16   Zero drift test
    17   Zero drift test
    18   Daily span and zero
    19       5.90    1    0.29    1   95.1    1
    20       5.94    5    0.28    5   95.3    5
    21       5.89    5    0.27    5   95.4    5
    22       5.88    5    0.26    5   95.5    5
    23       5.91    5    0.27    5   95.5    5

 AVERAGE
 FOR THE    5.85   21    0.20   21   96.7   20 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    5.79  544    0.46  547   92.1   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.88	5	0.28	5	95.2	5	
1	5.89	5	0.15	5	97.4	5	
2	5.89	5	0.10	5	98.3	5	
3	5.88	5	0.08	5	98.6	5	
4	5.86	5	0.17	5	97.1	5	
5	5.91	5	0.18	5	97.0	5	
6	5.94	5	0.07	5	98.7	5	
7	5.95	5	0.14	5	97.6	5	
8	5.89	5	0.26	5	95.6	5	
9	5.91	5	0.25	5	95.8	5	
10	5.80	5	0.24	5	96.0	5	
11	5.83	5	0.23	5	96.0	5	
12	5.84	5	0.24	5	95.9	5	
13	5.85	5	0.25	5	95.8	5	
14	5.90	5	0.25	5	95.7	5	
15	5.89	3	0.27	3	95.4	3	
16	SO_2 stratification check						
17	5.77	3	0.42	3	92.6	3	
18	5.89	5	0.16	5	97.2	5	
19	5.91	5		0		0	
20	5.91	5	0.17	4	97.2	4	Outlet SO_2 monitor down
21	5.88	5	0.14	5	97.6	5	
22	5.91	5	0.17	5	97.0	5	
23	5.91	5	0.20	5	96.6	5	
AVERAGE FOR THE DAY	5.88	23	0.20	22	96.6	22 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.81	545	0.44	547	92.5	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                       AUGUST 23, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS   /MMBTU  PTS     %    PTS

     0        5.89    4    0.31    4    94.7    4
     1        5.89    5    0.32    5    94.6    5
     2        5.89    5    0.33    5    94.4    5
     3        5.87    5    0.31    5    94.7    5
     4        5.91    5    0.33    5    94.4    5
     5        5.83    5    0.32    5    94.5    5
     6        5.77    5    0.32    5    94.5    5
     7        5.78    7    0.27    7    95.3    7
     8        5.77    5    0.43    5    92.5    5
     9        5.74    5    0.48    5    91.6    5
    10        5.74    5    0.37    5    93.5    5
    11        5.74    5    0.35    5    93.9    5
    12        5.71    5    0.31    5    94.6    5
    13        5.71    5    0.31    5    94.5    5
    14   SO2 stratification check
    15   SO2 stratification check
    16   SO2 stratification check
    17        5.91    3    0.40    3    93.2    3
    18        5.89    5    0.35    5    94.1    5
    19        5.92    5    0.21    5    96.4    5
    20        5.88    5    0.13    5    97.7    5
    21        5.69    5    0.06    5    99.0    5
    22        5.85    5    0.07    5    98.8    5
    23        5.89    5    0.24    5    95.9    5

 AVERAGE
 FOR THE      5.83   21    0.30   21    94.9  21 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY      5.80  549    0.42  551    92.7  20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-1

                   AUGUST 24, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0      5.88     6    0.28    6    95.2    6
     1      5.83     5    0.26    5    95.6    5
     2      5.81     5    0.27    5    95.4    5
     3      5.87     4    0.26    4    95.5    4
     4      5.80     5    0.25    5    95.8    5
     5      5.77     5    0.22    5    96.2    5
     6      5.66     5    0.21    5    96.2    5
     7      5.70     5    0.25    5    95.7    5
     8      5.71     5    0.22    5    96.1    5
     9      5.64     5    0.38    5    93.3    5
    10      5.70     4    0.46    4    91.9    4
    11      5.71     5    0.18    5    96.8    5
    12      5.72     5    0.13    5    97.8    5
    13      5.72     5    0.09    5    98.4    5
    14      5.69     5    0.08    5    98.5    5
    15      5.72     3    0.08    3    98.6    3
    16      5.71     5    0.09    5    98.4    5
    17      5.76     5    0.25    5    95.6    5
    18      5.84     1    0.33    1    94.4    1
    19      5.74     4    0.26    4    95.5    4
    20      5.74     5    0.20    5    96.5    5
    21      5.83     5    0.19    5    96.7    5
    22      5.86     5    0.20    5    96.6    5
    23      5.87     5    0.22    5    96.3    5


  AVERAGE
  FOR THE   5.76    24    0.22   24    96.2   23 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY   5.80   564    0.41  566    93.0   21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.87	5	0.20	5	96.7	5	
1	5.87	5	0.25	5	95.7	5	
2	5.86	5	0.29	5	95.1	5	
3	5.89	5	0.33	5	94.3	5	
4	5.84	5	0.38	5	93.6	5	
5	5.85	5	0.41	5	93.1	5	
6	5.87	5	0.41	5	93.0	5	
7	5.91	5	0.43	5	92.8	5	
8	5.92	4	0.33	4	94.5	4	
9	5.94	5	0.22	5	96.3	5	
10	6.02	5	0.24	5	96.1	5	
11	5.98	5	0.22	5	96.3	5	
12	5.90	5	0.18	5	96.9	5	
13	5.85	5	0.19	5	96.8	5	
14	5.72	5	0.20	5	96.6	5	
15	5.71	5	0.20	5	96.5	5	
16	5.82	5	0.29	5	95.0	5	
17	5.84	2	0.28	2	95.2	2	
18	5.97	3	0.35	3	94.1	3	
19	5.98	5	0.40	5	93.4	5	
20	6.00	5	0.38	5	93.7	5	
21	6.04	5	0.25	5	95.8	5	
22	6.11	5	0.41	5	93.2	5	
23	6.11	5	0.43	5	93.0	5	
AVERAGE FOR THE DAY	5.91	24	0.30	24	94.9	24	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.79	565	0.39	567	93.3	21	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                 ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                       AUGUST 26, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0        6.04    5    0.31    5    94.9    5
     1        5.98    5    0.19    5    96.9    5
     2        5.63    5    0.20    5    96.5    5
     3        5.66    5    0.19    5    96.7    5
     4        5.77    5    0.17    5    97.0    5
     5        5.77    5    0.20    5    96.5    5
     6        5.72    5    0.21    5    96.4    5
     7        5.74    5    0.20    5    96.6    5
     8        5.76    5    0.21    5    96.4    5
     9        5.82    5    0.21    5    96.4    5
    10        5.81    5    0.21    5    96.4    5
    11        5.82    5    0.23    5    96.0    5
    12        5.85    5    0.33    5    94.3    5
    13        5.84    5    0.42    5    92.8    5
    14        5.82    5    0.21    5    96.4    5
    15        5.87    5    0.39    5    93.4    5
    16        5.83    3    0.64    3    88.9    3
    17        5.77    3    0.44    3    92.3    3
    18        5.79    5    0.25    5    95.8    5
    19    Daily span and zero
    20        5.78    5    0.17    5    97.1    5
    21        5.77    5    0.13    5    97.7    5
    22        5.72    5    0.24    5    95.8    5
    23        5.85    5    0.14    5    97.6    5

 AVERAGE
 FOR THE      5.82   23    0.26   23    95.6   23 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY      5.78  576    0.38  578    93.4   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                    AUGUST 27, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0        5.74     5    0.20    5    96.6    5
   1        5.82     5    0.20    5    96.5    5
   2        5.98     5    0.31    5    94.7    5
   3        6.11     5    0.03    5    99.4    5
   4        6.15     5    0.03    5    99.6    5
   5        6.12     5    0.04    5    99.3    5
   6        6.09     5    0.04    5    99.3    5
   7        6.01     5    0.08    5    98.7    5
   8        5.89     5    0.20    5    96.5    5
   9        5.95     1    0.28    1    95.2    1
  10    Data acquisition system malfunction
  11    Data acquisition system malfunction
  12        6.02     1    3.62    1    39.8    1
  13    Daily span and zero
  14        5.96     3    0.47    3    92.0    3
  15        6.00     5    0.25    5    95.8    5
  16        5.97     5    0.17    5    97.2    5
  17        6.06     5    0.03    4    99.4    4
  18        6.07     4            0            0
  19    Data acquisition system malfunction
  20    Data acquisition system malfunction
  21        5.90     1    0.01    1    99.8    1
  22
  23        5.85     2    0.07    2    98.8    2


AVERAGE
FOR THE     5.98    18    0.36   17    97.4  14 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY     5.79   594    0.38  595    93.4  22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                    AUGUST 28, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %    PTS

     0       5.99    5    0.06    5    98.9    5
     1       5.87    5    0.05    5    99.2    5
     2       5.91    5    0.05    5    99.1    5
     3       5.95    5    0.07    5    98.8    5
     4       5.96    5    0.05    5    99.1    5
     5       5.87    5    0.05    5    99.2    5
     6       5.95    5    0.05    5    99.1    5
     7       5.98    5    0.06    5    99.0    5
     8       5.91    5    0.13    5    97.8    5
     9       5.99    5    0.32    5    94.6    5
    10       5.91    5    0.37    5    93.8    5
    11       5.95    5    0.35    5    94.1    5
    12       6.05    5    0.29    5    95.2    5
    13       6.04    5    0.25    5    95.9    5
    14       6.07    5    0.22    5    96.3    5
    15
    16       6.04    5    0.24    5    96.1    5
    17       6.07    5    0.19    5    96.9    5
    18       6.80    1    0.17    1    97.5    1
    19   Data acquisition system down
    20   Data acquisition system down
    21   Data acquisition system down
    22       6.07    1    0.09    1    98.5    1
    23       6.25    5    0.08    5    98.8    5


 AVERAGE
 FOR THE     6.03   20    0.16   20    97.3   18 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY     5.80  610    0.37  611    93.6   23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                         AUGUST 29, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0        6.08     5    0.05    5    99.2    5
     1        6.10     5    0.06    5    99.0    5
     2        6.64     5    0.07    5    98.9    5
     3        6.07     5    0.05    5    99.2    5
     4        6.06     5    0.08    5    98.6    5
     5        6.07     5    0.08    5    98.8    5
     6        6.03     5    0.05    5    99.1    5
     7        6.01     5    0.09    5    98.6    5
     8        5.66     4    0.07    4    98.8    4
     9   Scrubber down @ 0850
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

  AVERAGE
  FOR THE     6.01     9    0.07    9    98.9    9 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY     5.80   602    0.35  603    93.9   23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

AUGUST 30, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1		0		0		0	**Scrubber down all day**
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.80	580	1.34	581	94.1	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

```
                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                       AUGUST 31, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0                                               Scrubber down all day
    1              0            0            0
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE           0            0          0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  5.62   557   0.35   558   94.1  21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                    SEPTEMBER 1, 1981

            E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0
     1              0            0            0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

  AVERAGE
  FOR THE           0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   5.84   533   0.34   534   94.2   20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Scrubber down all day

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-1

                     SEPTEMBER 2, 1981

           E(IN)  NO. E(OUT) NO. REDUC. NO.
  HOUR     LB.SO2 OF  LB.SO2 OF   EFF.  OF
           /MMBTU PTS /MMBTU PTS   %    PTS

    0                                         Scrubber down all day
    1              0       0       0
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE          0       0       0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.85  509  0.33  510  94.4  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                    SEPTEMBER 3, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

    0
    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13                                                 Scrubber up @ 1425
   14      6.62    3    0.01    3    99.9    3
   15      6.60    5    0.01    5    99.8    5
   16      6.62    5    0.02    5    99.7    5
   17      6.59    5    0.01    5    99.9    5
   18      6.55    5    0.01    5    99.8    5
   19      6.53    5    0.03    5    99.6    5
   20      6.56    5    0.08    5    98.9    5
   21      6.48    5    0.09    5    98.6    5
   22      6.40    5    0.08    5    98.7    5
   23      6.35    5    0.07    5    99.0    5

 AVERAGE
 FOR THE   6.53   10    0.04   10    99.4   10 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.87  509    0.31  509    94.7   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-1

                 SEPTEMBER 4, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
  HOUR      LB.SO2 OF   LB.SO2 OF    EFF.   OF
            /MMBTU PTS  /MMBTU PTS    %     PTS

    0        6.32   5    0.02   5    99.7    5
    1
    2        6.32   5    0.02   5    99.6    5
    3        6.34   5    0.09   5    98.7    5
    4        6.29   5    0.20   5    96.8    5
    5        6.30   5    0.23   5    96.3    5
    6        6.28   5    0.16   5    97.5    5
    7        6.32   5    0.11   5    98.3    5
    8        6.39   5    0.26   5    95.9    5
    9        6.40   5    0.11   5    98.3    5
   10        6.34   5    0.14   5    97.8    5
   11        6.32   5    0.15   5    97.7    5
   12        6.28   5    0.21   5    96.7    5
   13        6.29   5    0.17   5    97.2    5
   14        6.40   1    0.17   1    97.3    1
   15        6.36   5    0.19   5    97.0    5
   16        6.41   5    0.19   5    97.0    5
   17        6.45   5    0.19   5    97.1    5
   18        6.47   5    0.13   5    98.0    5
   19        6.45   5    0.20   5    96.8    5
   20        6.41   5    0.16   5    97.6    5
   21        6.33   5    0.24   5    96.3    5
   22        6.28   5    0.21   5    96.6    5
   23        6.23   5    0.09   5    98.5    5


AVERAGE
FOR THE      6.35  23    0.16  23    97.5   22 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY      5.89 512    0.28 512    95.3   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                      SEPTEMBER 5. 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0        6.23    5     0.10    5    98.3    5
     1        6.26    5     0.15    5    97.7    5
     2        6.33    5     0.14    5    97.8    5
     3        6.38    5     0.19    5    97.1    5
     4        6.36    5     0.21    5    96.7    5
     5        6.29    5     0.17    5    97.2    5
     6        6.28    5     0.16    5    97.4    5
     7        6.32    5     0.17    5    97.4    5
     8        6.38    5     0.22    5    96.6    5
     9        6.41    5     0.16    5    97.5    5
    10        6.38    5     0.10    5    98.5    5
    11        6.33    5     0.20    5    96.8    5
    12        6.26    5     0.17    5    97.3    5
    13        6.25    5     0.14    5    97.8    5
    14        6.22    4     0.12    4    98.1    4
    15        6.40    2     0.21    2    96.8    2
    16        6.42    5     0.16    5    97.5    5
    17        6.39    5     0.21    5    96.8    5
    18        6.44    5     0.11    5    98.2    5
    19        6.42    5     0.14    5    97.9    5
    20        6.45    5     0.14    5    97.8    5
    21        6.40    5     0.20    5    96.9    5
    22        6.41    5     0.16    5    97.6    5
    23        6.44    5     0.23    5    96.5    5


 AVERAGE
 FOR THE      6.35   24     0.16   24    97.4   24 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY      5.92  512     0.25  512    95.8   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

SEPTEMBER 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.39	5	0.16	5	97.5	5	
1	6.37	5	0.16	5	97.5	5	
2	6.33	5	0.09	5	98.5	5	
3	6.35	5	0.16	5	97.4	5	
4	6.34	5	0.14	5	97.8	5	
5	6.36	5	0.14	5	97.7	5	
6	6.40	5	0.10	5	98.4	5	
7	6.32	5	0.15	5	97.6	5	
8	6.35	5	0.18	5	97.1	5	
9	6.31	5	0.17	5	97.2	5	
10	6.29	5	0.16	5	97.5	5	
11	6.27	5	0.26	5	95.8	5	
12	6.29	5	0.09	5	98.5	5	
13	6.29	5	0.10	5	98.4	5	
14	6.28	5	0.10	5	98.4	5	
15	6.26	5	0.17	5	97.2	5	
16	6.27	5	0.17	5	97.2	5	
17	6.20	5	0.13	5	97.9	5	
18	6.24	5	0.14	5	97.8	5	
19	6.23	5	0.09	5	98.6	5	
20	6.25	5	0.09	5	98.5	5	
21	6.24	5	0.09	5	98.6	5	
22	6.21	4	0.12	4	98.0	4	
23	**Data acquisition system down**						
AVERAGE FOR THE DAY	6.30	23	0.14	23	97.8		23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.95	513	0.24	512	96.0		19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-1

                   SEPTEMBER 7, 1981

             E(IN)  NO. E(OUT) NO. REDUC. NO.
  HOUR     LB.SO2  OF  LB.SO2  OF   EFF.   OF
           /MMBTU PTS /MMBTU PTS    %     PTS

    0   Data acquisition system down
    1
    2
    3
    4
    5
    6
    7
    8
    9        6.21   3   0.14    3   97.8    3
   10        6.16   5   0.09    5   98.5    5
   11        6.22   5   0.07    5   98.9    5
   12        6.25   5   0.22    5   96.6    5
   13        6.39   5   0.19    5   97.0    5
   14        6.44   5   0.25    5   96.2    5
   15        6.47   1   0.22    1   96.6    1
   16        6.35   3   0.18    3   97.2    3
   17        6.22   1   0.15    2   96.5    1
   18        6.30   5   0.26    5   95.9    5
   19        6.33   5   0.21    5   96.6    5
   20        6.32   5   0.16    5   97.4    5
   21        6.29   5   0.12    5   98.0    5
   22        6.22   5   0.18    5   97.1    5
   23        6.17   3   0.23    3   96.2    3

AVERAGE
FOR THE     6.29  15    0.18   15   97.2  13 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     5.97  507   0.24  506   96.0  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                   SEPTEMBER 8, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11       6.23    3    0.06    3    99.1    3
    12       6.46    5    0.12    5    98.1    5
    13       6.66    4    0.09    4    98.7    4
    14       6.72    3    0.13    3    98.1    3
    15       6.81    5    0.18    5    97.3    5
    16       6.60    1    0.16    1    97.6    1
    17    Daily span and zero
    18       6.65    5    0.18    5    97.3    5
    19       6.63    5    0.10    5    98.5    5
    20       6.61    5    0.21    5    96.8    5
    21       6.52    5    0.21    5    96.7    5
    22       6.40    5    0.01    5    99.8    5
    23       6.17    3    0.23    3    96.2    3

 AVERAGE
 FOR THE     6.54   12    0.14   12    97.9   11 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     6.00  505    0.22  504    96.3   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

SEPTEMBER 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.53	4	0.09	4	98.6	4
2	6.41	5	0.20	5	96.9	5
3	6.40	5	0.20	5	96.9	5
4	6.30	5	0.16	5	97.4	5
5	6.21	5	0.17	5	97.3	5
6	6.33	5	0.16	5	97.4	5
7	6.38	5	0.11	5	98.3	5
8	6.37	4	0.12	4	98.1	4
9	6.35	3	0.20	3	96.9	3
10	6.25	4	0.01	4	99.8	4
11	6.20	4	0.03	4	99.5	4
12						
13	6.01	5	0.08	5	98.6	5
14	5.96	5	0.12	5	98.0	5
15	SO_2 monitor calibration check					
16	SO_2 monitor calibration check					
17	SO_2 monitor calibration check					
18	5.53	5	0.09	5	98.4	5
19	5.39	3	0.24	3	95.6	3
20	5.28	5	0.20	5	96.2	5
21	5.28	5	0.13	5	97.5	5
22	5.28	5	0.13	5	97.6	5
23	5.28	5	0.16	5	95.9	5
AVERAGE FOR THE DAY	5.98	19	0.14	19	97.7	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.00	500	0.21	499	96.5	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                       SEPTEMBER 10, 1981

               E(IN)   NO. E(OUT) NO. REDUC. NO.
   HOUR      LB.SO2 OF  LB.SO2 OF    EFF.  OF
             /MMBTU PTS /MMBTU PTS    %    PTS

    0
    1          5.08  2    0.07   2    98.5   2
    2          5.10  5    0.06   5    98.8   5
    3          5.12  5    0.22   5    95.8   5
    4          5.12  5    0.11   5    97.9   5
    5          5.09  5    0.19   5    96.3   5
    6          5.06  5    0.03   5    99.5   5
    7          5.04  5    0.15   5    97.1   5
    8
    9          5.12  4    0.07   4    98.7   4
   10     Data acquisition system down
   11
   12
   13
   14          5.40  3    0.02   3    99.7   3
   15          5.43  2    0.01   2    99.8   2
   16
   17          5.99  3    0.14   3    97.6   3
   18          6.00  5    0.09   5    98.6   5
   19          5.95  5    0.10   5    98.3   5
   20          5.96  5    0.15   5    97.4   5
   21          5.96  5    0.22   5    96.4   5
   22          5.96  5    0.21   5    96.5   5
   23          5.98  5    0.04   5    99.3   5

 AVERAGE
 FOR THE       5.49  17   0.11   17   98.0  17 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY       5.97  495  0.20   494  96.6  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                     SEPTEMBER 11, 1981

           E(IN)   NO.  E(OUT) NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2 OF    EFF.   OF
           /MMBTU  PTS  /MMBTU PTS    %     PTS

    0       5.92    5    0.01   5    99.8    5
    1       5.82    5    0.01   5    99.8    5
    2       5.86    5    0.02   5    99.7    5
    3       5.85    5    0.01   5    99.8    5
    4       5.85    5    0.02   5    99.7    5
    5       5.79    5    0.01   5    99.8    5
    6       5.78    5    0.03   5    99.5    5
    7       5.83    5    0.05   5    99.1    5
    8       5.84    5    0.11   5    98.1    5
    9       5.86    5    0.14   5    97.6    5
   10       5.87    5    0.14   5    97.6    5
   11       5.95    5    0.21   5    96.5    5
   12       6.00    5    0.15   5    97.4    5
   13       6.04    5    0.18   5    96.9    5
   14       6.11    5    0.22   5    96.5    5
   15       6.19    5    0.10   5    98.4    5
   16       6.19    5    0.04   5    99.3    5
   17       6.15    5    0.16   5    97.4    5
   18       6.13    5    0.13   5    97.8    5
   19       6.08    5    0.06   5    98.9    5
   20       5.84    5    0.01   5    99.7    5
   21       5.92    5    0.01   5    99.8    5
   22       5.97    5    0.02   5    99.6    5
   23       5.97    5    0.01   5    99.9    5

 AVERAGE
 FOR THE    5.95   24    0.08  24    98.7  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    5.97  519    0.20 509    96.7  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                     SEPTEMBER 12, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

   0       6.06    4    0.01    4    99.9    4
   1       6.07    5    0.01    5    99.8    5
   2       6.06    5    0.01    5    99.9    5
   3       6.06    5    0.01    5    99.8    5
   4       6.05    5    0.01    5    99.8    5
   5       6.05    5    0.01    5    99.8    5
   6       6.04    5    0.02    5    99.7    5
   7       6.10    5    0.02    5    99.7    5
   8       6.16    5    0.02    5    99.8    5
   9       6.11    5    0.02    5    99.6    5
  10       6.12    3    0.03    3    99.5    3
  11   Data acquisition system down
  12
  13
  14
  15
  16       6.24    1    0.09    1    98.5    1
  17       6.21    5    0.12    5    98.1    5
  18       6.18    5    0.16    5    97.3    5
  19       6.19    5    0.16    5    97.4    5
  20   Printer ran out of paper
  21   Printer ran out of paper
  22   Printer ran out of paper
  23       6.18    1    0.03    1    99.5    1

AVERAGE
FOR THE    6.12   16    0.05   16    99.3   14 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    5.98  523    0.19  513    96.9   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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```
                     ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                        SEPTEMBER 13, 1981

            E(IN)    NO.  E(OUT)   NO.  REDUC.  NO.
 HOUR       LB.SO2   OF   LB.SO2   OF    EFF.   OF
            /MMBTU   PTS  /MMBTU   PTS    %     PTS

   0         6.24     5    0.01     5    99.9    5
   1         6.27     5    0.01     5    99.8    5
   2         6.24     5    0.01     5    99.9    5
   3         6.24     5    0.01     5    99.8    5
   4         6.21     5    0.01     5    99.8    5
   5         6.24     5    0.02     5    99.7    5
   6         6.28     5    0.01     5    99.8    5
   7         6.32     5    0.02     5    99.8    5
   8         6.38     5    0.02     5    99.6    5
   9         6.34     5    0.02     5    99.7    5
  10         6.35     5    0.02     5    99.6    5
  11         6.38     5    0.03     5    99.6    5
  12         6.45     5    0.15     5    97.6    5
  13         6.51     5    0.14     5    97.8    5
  14         6.51     5    0.20     5    97.0    5
  15         6.43     5    0.20     5    96.9    5
  16         6.49     5    0.12     5    98.2    5
  17         6.42     5    0.18     5    97.2    5
  18         6.37     5    0.15     5    97.7    5
  19         6.33     5    0.19     5    97.0    5
  20         6.33     5    0.05     5    99.2    5
  21         6.31     5    0.09     5    98.6    5
  22         6.24     5    0.07     5    99.0    5
  23         6.19     4    0.02     4    99.8    4

AVERAGE
FOR THE      6.34    24    0.07    24    98.9   24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY      6.00   524    0.18   514    96.9   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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            ADIPIC ACID DEMONSTRATION

               SCRUBBER MODULE S-1

               SEPTEMBER 14, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

   0       6.21     5    0.02    5    99.7    5
   1       6.14     5    0.02    5    99.7    5
   2       6.16     5    0.02    5    99.7    5
   3       6.11     5    0.00    5    99.9    5
   4       6.09     5    0.01    5    99.8    5
   5       6.09     5    0.02    5    99.7    5
   6       6.11     5    0.01    5    99.8    5
   7       6.13     5    0.07    5    98.8    5
   8       6.14     5    0.09    5    98.5    5
   9       6.25     5    0.16    5    97.4    5
  10       6.18     5    0.16    5    97.5    5
  11       6.20     5    0.09    5    98.6    5
  12       6.20     5    0.20    5    96.8    5
  13       6.24     5    0.17    5    97.3    5
  14       6.26     5    0.19    5    97.0    5
  15       6.22     5    0.15    5    97.6    5
  16       6.24     3    0.12    3    98.0    3
  17       6.23     4    0.13    4    97.9    4
  18       6.25     5    0.08    5    98.7    5
  19       6.24     5    0.08    5    98.8    5
  20       6.29     5    0.07    5    98.9    5
  21       6.26     5    0.16    5    97.4    5
  22       6.18     5    0.13    5    97.8    5
  23

AVERAGE
FOR THE    6.19    23    0.09   23    98.5   23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.02   524    0.18  522    97.0   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

SEPTEMBER 15, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.09	5	0.14	5	97.7	5	
1	6.11	5	0.03	5	99.4	5	
2	6.14	5	0.02	5	99.6	5	
3	6.03	5	0.02	5	99.7	5	
4	6.01	5	0.01	5	99.8	5	
5	6.01	5	0.01	5	99.8	5	
6	5.98	5	0.01	5	99.8	5	
7	6.08	5	0.09	5	98.4	5	
8	6.02	5	0.18	5	96.9	5	
9	6.13	5	0.07	5	98.9	5	
10	6.17	5	0.14	5	97.7	5	
11	6.20	5	0.14	5	97.7	5	
12	6.18	5		0		0	Data acquisition system malfunction
13	6.18	5		0		0	Data acquisition system malfunction
14							Data acquisition system malfunction
15	6.22	4	0.15	4	97.6	4	
16	6.21	5	0.10	5	98.4	5	
17	6.19	5	0.13	5	97.9	5	
18	6.15	5	0.22	5	96.4	5	
19	6.16	5	0.16	5	97.4	5	
20	6.23	5	0.22	5	96.5	5	
21	6.22	5	0.12	5	98.0	5	
22	6.18	4	0.02	5	99.7	4	
23	Scrubber down @ 2240						
AVERAGE FOR THE DAY	6.13	22	0.10	20	98.4	20 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.02	522	0.19	518	97.0	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                     SEPTEMBER 16, 1981

             E(IN)   NO. E(OUT) NO. REDUC. NO.
   HOUR     LB.SO2  OF  LB.SO2 OF   EFF.  OF
            /MMBTU PTS /MMBTU PTS    %    PTS

     0   Scrubber down
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10      6.90   2    1.09   2    84.4   2       Scrubber up @ 1035
    11      6.60   5    0.35   5    94.7   5
    12      6.59   5    0.36   5    94.6   5
    13      6.60   5    0.33   5    95.1   5
    14      6.60   5    0.25   5    96.2   5
    15
    16
    17      6.63   2    0.52   2    92.1   2
    18      6.57   5    0.45   5    93.1   5
    19      6.64   5    0.53   5    92.0   5
    20      6.60   5    0.51   5    92.2   5
    21      6.60   5    0.48   5    92.7   5
    22      6.63   3    0.39   3    94.1   3
    23

  AVERAGE
  FOR THE   6.63  11    0.48  11    92.8  11 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   6.04  513   0.18  509   96.9  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                   SEPTEMBER 17, 1981

          E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS    %     PTS

  0
  1       6.64    5    0.31    5    95.4    5
  2       6.67    4    0.34    4    95.0    4
  3       6.62    5    0.39    5    94.2    5
  4       6.65    6    0.41    6    93.8    6
  5       6.66    5    0.43    5    93.5    5
  6       6.68    5    0.43    5    93.5    5
  7       6.64    5    0.45    5    93.2    5
  8       6.76    5    0.51    5    92.5    5
  9       6.78    5    0.55    5    91.8    5
 10       6.66    5    0.71    5    89.3    5
 11       6.86    4    0.40    4    94.3    4
 12       6.55    4    0.26    4    96.1    4
 13       6.60    5    0.26    5    96.0    5
 14       6.63    5    0.38    5    94.2    5
 15       6.64    5    0.30    5    95.5    5
 16       6.65    4    0.32    4    95.2    4
 17       6.67    5    0.11    5    98.4    5
 18       6.58    5    0.12    5    98.1    5
 19       6.72    5    0.60    5    91.0    5
 20       6.68    5    0.70    5    89.5    5
 21       6.72    4    0.62    4    90.8    4
 22       6.74    5    0.54    5    92.1    5
 23       6.76    5    0.23    5    96.7    5

AVERAGE
FOR THE   6.68   23    0.41   23    93.9  23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   6.07  514    0.19  510    96.9  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-1

                  SEPTEMBER 18, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

    0      6.71    5     0.21    5    96.9    5
    1      6.77    5     0.20    5    97.0    5
    2      6.75    5     0.20    5    97.1    5
    3      6.71    5     0.17    5    97.4    5
    4      6.71    5     0.18    5    97.3    5
    5      6.68    5     0.19    5    97.2    5
    6      6.67    5     0.27    5    95.9    5
    7      6.71    5     0.75    5    88.8    5
    8      6.68    5     1.00    5    85.1    5
    9      6.70    5     1.06    5    84.3    5
   10      6.68    5     1.08    5    83.9    5
   11      6.62    5     1.03    5    84.4    5
   12      6.62    6     0.84    6    87.4    6
   13
   14              0             0            0
   15                                              Scrubber down @ 1425
   16
   17
   18
   19
   20
   21              0             0            0
   22
   23


 AVERAGE
 FOR THE   6.69   13     0.55   13    91.7   13 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.10  506     0.20  502    96.8   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                      SEPTEMBER 19, 1981

             E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0                                              Scrubber down
     1
     2
     3               0            0            0
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

  AVERAGE
  FOR THE            0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.12   482  0.20   478   96.8  16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                     ADIPIC ACID DEMONSTRATION

                        SCRUBBER MODULE S-1

                        SEPTEMBER 20, 1981

          F(IN)  NO.  E(OUT) NO.  REDUC. NO.
  HOUR    LB.SO2 OF   LB.SO2 OF    EFF.  OF
          /MMBTU PTS  /MMBTU PTS    %    PTS

    0                                          Scrubber down
    1
    2
    3             0           0           0
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE          0           0          0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  6.13   461  0.20   457  96.8  15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

SEPTEMBER 21, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							
2							
3							
4							
5							
6	6.32	1	0.11	1	98.2	1	Scrubber up @ 0645
7	6.34	5	0.15	5	97.6	5	
8	6.32	5	0.35	5	94.5	5	
9							
10	6.43	5	0.71	5	89.1	5	
11	6.27	5	0.90	5	85.6	5	
12	6.30	5	0.74	5	88.3	5	
13	6.34	5	0.70	5	88.9	5	
14	6.31	5	0.84	5	86.6	5	
15	6.32	5	0.82	5	87.0	5	
16	6.32	3	0.88	3	86.1	3	
17	6.39	4	0.91	4	85.8	4	
18	6.40	5	0.91	5	85.8	5	
19	6.37	5	0.76	5	88.1	5	
20	6.46	6	0.77	6	88.2	6	
21	6.41	5	0.72	5	88.7	5	
22	6.34	5	0.46	5	92.7	5	
23	6.45	4	0.30	4	95.5	4	
AVERAGE FOR THE DAY	6.36	17	0.65	17	89.3	16 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.15	455	0.21	452	96.6	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

SEPTEMBER 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.29	5	0.17	5	97.2	5	
1	6.23	5	0.18	5	97.1	5	
2	6.21	4	0.14	4	97.7	4	
3	6.22	5	0.16	5	97.4	5	
4	6.21	5	0.17	5	97.3	5	
5	6.22	5	0.13	5	97.9	5	
6	6.17	5	0.13	5	97.9	5	
7	6.40	5	0.28	5	95.6	5	
8	6.28	5	0.62	5	90.2	5	
9	6.29	5	0.52	5	91.7	5	
10	6.33	5	0.66	5	89.7	5	
11	6.31	5	0.66	5	89.5	5	
12	6.29	5	0.68	5	89.2	5	
13	6.29	5	0.73	5	88.5	5	
14	6.21	5	0.66	5	89.4	5	
15	6.22	5	0.62	5	90.0	5	
16	6.20	5	0.66	5	89.4	5	
17	6.26	6	0.69	6	89.0	6	
18	6.27	5	0.61	5	90.3	5	
19	6.30	5	0.61	5	90.3	5	
20	6.32	5	0.61	5	90.4	5	
21	6.32	5	0.59	5	90.7	5	
22	6.40	5	0.38	5	94.1	5	
23	6.65	5	0.25	5	96.3	5	
AVERAGE FOR THE DAY	6.29	24	0.45	24	92.8		24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.17	458	0.22	455	96.4		14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                     SEPTEMBER 23, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0        6.43    5     0.14    5    97.8    5
   1        6.36    5     0.12    5    98.1    5
   2        6.44    5     0.14    5    97.8    5
   3        6.44    5     0.12    5    98.1    5
   4        6.45    5     0.13    5    98.0    5
   5        6.56    5     0.17    5    97.5    5
   6        6.62    5     0.15    5    97.7    5
   7        6.66    5     0.22    5    96.7    5
   8        6.54    5     0.39    5    94.0    5
   9        6.57    5     0.59    5    91.0    5
  10        6.65    6     0.48    6    92.8    6
  11        6.68    5     0.62    5    90.8    5
  12        6.72    5     0.69    5    89.7    5
  13        6.75    5     0.79    5    88.2    5
  14        6.77    5     0.90    5    86.6    5
  15        6.78    4     0.98    4    85.6    4
  16        6.71    1     0.87    1    87.0    1
  17        6.75    5     1.15    5    83.0    5
  18        6.77    5     1.03    5    84.8    5
  19        6.72    5     0.92    5    86.3    5
  20        6.70    5     0.80    5    88.1    5
  21        6.67    5     0.78    5    88.3    5
  22        6.72    5     0.48    5    92.8    5
  23        6.69    5     0.33    5    95.1    5

AVERAGE
FOR THE     6.63   24     0.54   24    92.1   23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     6.22  458     0.24  455    96.2   14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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6

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              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-1

                 SEPTEMBER 24, 1981

          E(IN)  NO. E(OUT) NO. REDUC. NO.
 HOUR    LB.SO2  OF  LB.SO2  OF   EFF.  OF
         /MMBTU PTS /MMBTU PTS    %    PTS

   0
   1      6.65   5   0.29    5   95.6   5
   2
   3      6.54   5   0.28    5   95.7   5
   4      6.47   5   0.24    5   96.2   5
   5      6.46   5   0.27    5   95.8   5
   6      6.46   5   0.34    5   94.7   5
   7      6.43   5   0.34    5   94.7   5
   8  Data acquisition system malfunction
   9      6.51   5   0.38    5   94.1   5
  10      6.48   6   0.63    6   90.3   6
  11      6.44   5   0.69    5   89.2   5
  12      6.41   5   0.67    5   89.6   5
  13      6.39   5   0.68    5   89.3   5
  14      6.36   5   0.76    5   88.1   5
  15      6.35   5   0.78    5   87.7   5
  16      6.33   4   0.81    4   87.2   4
  17      6.30   5   0.88    5   86.1   5
  18      6.28   5   0.89    5   85.8   5
  19      6.28   5   0.91    5   85.5   5
  20      6.25   4   0.91    4   85.4   4
  21      6.22   5   0.71    5   88.6   5
  22      6.21   5   0.41    5   93.3   5
  23      6.12   5   0.26    5   95.8   5


AVERAGE
FOR THE   6.38  21   0.58   21   90.9  21 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   6.24 455   0.25  452   96.0  14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                     SEPTEMBER 25. 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0
     1      5.97     2    0.26    1    95.8    1
     2      6.11     5    0.56    5    90.9    5
     3      6.13     6    0.55    6    91.1    6
     4      6.04     5    0.39    5    93.5    5
     5      6.08     5    0.52    5    91.4    5
     6      6.11     5    0.72    5    88.2    5
     7      6.14     5    0.63    5    88.8    5
     8      6.18     5    0.70    5    88.7    5
     9      6.18     5    0.57    5    90.8    5
    10      6.15     5    0.68    5    88.9    5
    11      6.14     5    0.71    5    88.4    5
    12      6.10     5    0.79    5    87.1    5
    13      6.07     5    0.68    5    88.8    5
    14      6.05     5    0.57    5    90.5    5
    15      6.07     5    0.42    5    93.1    5
    16      6.06     2    0.40    2    93.3    2
    17      6.04     5    0.43    5    92.9    5
    18      6.04     5    0.41    5    93.1    5
    19      6.12     5    0.38    5    93.8    5
    20      6.06     5    0.40    5    93.5    5
    21      6.05     5    0.19    5    96.8    5
    22      6.04     5    0.17    5    97.2    5
    23      6.04     5    0.12    5    98.0    5


AVERAGE
FOR THE     6.08    23    0.49   23    91.8   22 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY     6.26   455    0.26  452    95.8   14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                      SEPTEMBER 26, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0      6.03     5    0.33    5    94.5    5
    1      5.96     5    0.36    5    93.9    5
    2      6.00     5    0.38    5    93.7    5
    3      6.00     5    0.36    5    94.1    5
    4      5.99     5    0.31    5    94.8    5
    5      6.00     5    0.28    5    95.4    5
    6      6.02     5    0.34    5    94.4    5
    7      5.99     5    0.28    5    95.3    5
    8      6.03     5    0.71    5    88.2    5
    9      6.01     5    0.52    5    91.4    5
   10      6.00     5    0.46    5    92.3    5
   11      5.99     5    0.41    5    93.1    5
   12      6.00     5    0.39    5    93.4    5
   13      5.99     5    0.35    5    94.2    5
   14      6.04     5    0.34    5    94.3    5
   15      5.99     5    0.40    5    93.4    5
   16      6.13     5    0.21    5    96.5    5
   17      6.07     5    0.19    5    96.9    5
   18      6.14     5    0.19    5    96.9    5
   19      6.11     5    0.17    5    97.3    5
   20      6.13     5    0.18    5    97.0    5
   21      6.14     5    0.18    5    97.1    5
   22      6.14     5    0.14    5    97.7    5
   23      6.18     5    0.09    5    98.6    5

AVERAGE
FOR THE    6.05    24    0.32   24    94.8   24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.26   461    0.26  459    95.8   15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                       SEPTEMBER 27, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR      LB.SO2  OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0        6.24   4     0.08    4    98.7    4
     1        6.24   4     0.07    4    98.9    4
     2        6.28   5     0.06    5    99.0    5
     3        6.27   4     0.05    4    99.2    4
     4        6.29   5     0.06    5    99.0    5
     5        6.31   5     0.05    5    99.2    5
     6        6.29   5     0.04    5    99.4    5
     7        6.32   5     0.04    5    99.4    5
     8        6.35   5     0.07    5    98.9    5
     9        6.35   5     0.07    5    98.9    5
    10        6.33   5     0.05    5    99.2    5
    11        6.31   5     0.05    5    99.2    5
    12        6.32   5     0.07    5    99.0    5
    13        6.27   5     0.05    5    99.1    5
    14        6.35   5     0.07    5    99.0    5
    15        6.36   5     0.05    5    99.2    5
    16        6.43   5     0.06    5    99.1    5
    17        6.43   5     0.05    5    99.3    5
    18        6.38   5     0.05    5    99.2    5
    19        6.39   5     0.06    5    99.0    5
    20        6.44   5     0.08    5    98.7    5
    21        6.43   5     0.08    5    98.8    5
    22        6.39   5     0.06    5    99.1    5
    23        6.33   5     0.04    5    99.4    5

 AVERAGE
 FOR THE      6.34  24     0.06   24    99.1  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY      6.27  465    0.26  463    95.9  15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                      SEPTEMBER 28, 1981

           E(IN)   NO. E(OUT)  NO. REDUC. NO.
 HOUR     LB.SO2  OF  LB.SO2  OF    EFF.  OF
          /MMBTU PTS /MMBTU  PTS    %    PTS

   0       6.40    5   0.04    5   99.4   5
   1       6.45    5   0.05    5   99.3   5
   2       6.44    5   0.05    5   99.3   5
   3       6.49    5   0.05    5   99.2   5
   4       6.53    5   0.06    5   99.1   5
   5       6.57    5   0.06    5   99.1   5
   6       6.56    5   0.04    5   99.4   5
   7       6.72    5   0.08    5   98.8   5
   8       6.51    5   0.11    5   98.4   5
   9       6.54    5   0.14    5   97.9   5
  10       6.53    5   0.16    5   97.6   5
  11       6.53    1   0.24    1   96.3   1
  12   Data acquisition system malfunction
  13       6.46    5   0.21    5   96.7   5
  14       6.43    5   0.41    5   93.6   5
  15       6.51    3   0.21    3   94.8   3
  16       6.50    5   0.21    5   96.8   5
  17       6.52    5   0.18    5   97.2   5
  18       6.57    5   0.49    5   92.5   5
  19       6.55    5   0.59    5   91.1   5
  20       6.59    5   0.55    5   91.7   5
  21       6.58    5   0.44    5   93.3   5
  22       6.50    5   0.24    5   96.4   5
  23       6.58    5   0.15    5   97.8   5

AVERAGE
FOR THE    6.52   23   0.21   23   96.9  22 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.29  479   0.26  477   95.9  16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                       SEPTEMBER 29, 1981

HOUR         F(IN)  NO.  F(OUT)  NO.  REDUC.  NO.
            LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

  0          6.32    5    0.09    5    98.6    5
  1          6.27    5    0.06    5    99.1    5
  2          6.25    5    0.05    5    99.2    5
  3          6.31    5    0.06    5    99.1    5
  4          6.29    5    0.07    5    98.9    5
  5          6.26    5    0.07    5    99.0    5
  6          6.31    5    0.08    5    98.8    5
  7          6.37    5    0.11    5    98.3    5
  8          6.37    5    0.14    5    97.8    5
  9          6.43    5    0.13    5    98.0    5
 10          6.38    5    0.22    5    96.5    5
 11          6.38    5    0.22    5    96.6    5
 12          6.36    5    0.29    5    95.5    5
 13          6.34    4    0.31    4    95.1    4
 14          6.31    1    0.33    1    94.8    1
 15          6.42    3    0.45    3    93.0    3
 16          6.39    5    0.45    5    92.9    5
 17          6.44    5    0.37    5    94.3    5
 18          6.39    5    0.36    5    94.3    5
 19          6.43    5    0.36    5    94.4    5
 20          6.44    5    0.33    5    94.9    5
 21          6.46    5    0.32    5    95.1    5
 22          6.42    5    0.31    5    95.1    5
 23          6.41    5    0.20    5    96.9    5

AVERAGE
FOR THE      6.36   24    0.22   24    96.6  23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY      6.29  503    0.25  501    95.9  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

SEPTEMBER 30. 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.31	4	0.10	4	98.5	4	
1	6.23	5	0.09	5	98.5	5	
2	6.28	5	0.09	5	98.6	5	
3	6.23	5	0.08	5	98.6	5	
4	6.26	5	0.09	5	98.6	5	
5	6.24	6	0.09	6	98.5	6	
6	6.41	5	0.14	5	97.9	5	
7	6.29	4	0.16	4	97.5	4	
8	6.31	5	0.16	5	97.5	5	
9	6.32	5	0.38	5	94.1	5	
10							
11	6.25	2	0.29	2	95.3	2	Scrubber down @ 1115
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22	6.42	5	0.31	5	95.1	5	
23							
AVERAGE FOR THE DAY	6.29	12	0.16	12	97.4		12 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.29	515	0.25	513	96.0		17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Scrubber up @ 1740
Data acquisition system down

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                   ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-1

                        OCTOBER 1, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR       LB.SO2   OF   LB.SO2   OF    EFF.   OF
             /MMBTU  PTS   /MMBTU  PTS     %     PTS

    0          6.34    3     0.07    1    98.9    1
    1          6.43    5             0            0
    2          6.40    5     0.06    2    99.1    2
    3          6.54    5     0.07    3    98.9    3
    4          6.57    6     0.10    2    98.5    2
    5          6.63    5     0.08    3    98.7    3
    6          6.61    4     0.09    2    98.6    2
    7          6.67    5     0.13    1    98.1    1
    8          6.87    4     0.21    4    96.9    4
    9          6.73    5     0.14    2    97.9    2
   10          6.75    4     0.14    2    97.9    2
   11          6.73    5     0.14    3    98.0    3
   12          6.73    5     0.42    5    93.7    5
   13          6.73    5     0.51    3    92.4    3
   14      Daily span and zero
   15          6.55    4     0.28    4    95.7    4
   16          6.55    5     0.30    5    95.4    5
   17          6.59    5     0.29    5    95.6    5
   18          6.60    5     0.27    5    95.9    5
   19          6.59    5     0.32    5    95.1    5
   20          6.67    5     0.33    5    95.1    5
   21          6.64    5     0.30    5    95.4    5
   22          6.71    5     0.18    5    97.2    5
   23          7.01    5     0.13    5    98.2    5

AVERAGE
FOR THE        6.63   23     0.21   22    96.7   20 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY        6.30  538     0.25  535    96.0   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

OCTOBER 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.60	5	0.07	5	98.9	5
1	6.61	5	0.04	5	99.3	5
2	6.63	5	0.06	5	99.0	5
3	6.71	4	0.05	4	99.3	4
4	6.71	5	0.05	5	99.2	5
5	6.76	5	0.05	5	99.2	5
6	6.78	5	0.07	5	99.0	5
7	6.82	5	0.07	5	99.0	5
8	6.80	5	0.14	5	97.9	5
9	6.50	5	0.14	5	97.9	5
10	6.78	5	0.27	5	96.0	5
11	6.72	5	0.33	5	95.0	5
12	6.76	6	0.37	6	94.6	6
13	6.75	5	0.41	5	93.9	5
14	6.71	5	0.36	5	94.6	5
15	6.72	5	0.36	5	94.6	5
16	6.73	2	0.34	2	94.9	2
17	6.76	5	0.31	5	95.5	5
18	6.77	5	0.18	5	97.4	5
19	6.61	5	0.13	5	98.0	5
20	6.65	5	0.18	5	97.2	5
21	6.71	5	0.13	5	98.1	5
22	6.70	5	0.12	5	98.2	5
23	6.66	5	0.14	5	97.9	5
AVERAGE FOR THE DAY	6.72	24	0.18	24	97.3	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.32	562	0.25	559	96.1	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-1

                       OCTOBER 3, 1981

              E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS    %     PTS

      0       6.66    5    0.12    5    98.2    5
      1       6.70    5    0.11    5    98.3    5
      2       6.78    5    0.11    5    98.4    5
      3       6.71    5    0.11    5    98.3    5
      4       6.72    5    0.13    5    98.0    5
      5       6.72    5    0.12    5    98.2    5
      6       6.76    5    0.13    5    98.1    5
      7       6.71    4    0.11    4    98.4    4
      8       6.70    6    0.17    6    97.4    6
      9       6.72    5    0.21    5    96.8    5
     10       6.70    5    0.28    5    95.8    5
     11       6.60    5    0.27    5    95.9    5
     12       6.62    5    0.26    5    96.1    5
     13       6.56    5    0.22    5    96.6    5
     14       6.57    5    0.18    5    97.2    5
     15       6.49    5    0.18    5    97.2    5
     16       6.52    5    0.17    5    97.4    5
     17       6.49    5    0.20    5    97.0    5
     18       6.50    5    0.23    5    96.4    5
     19       6.53    5    0.25    5    96.1    5
     20       6.52    5    0.25    5    96.1    5
     21       6.53    5    0.23    5    96.5    5
     22       6.53    5    0.19    5    97.1    5
     23       6.56    4    0.13    4    98.0    4

  AVERAGE
  FOR THE     6.62   24    0.18   24    97.2   24 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY     6.33  576    0.25  573    96.1   20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

OCTOBER 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.48	5	0.11	5	98.4	5
1	6.54	5	0.11	5	98.3	5
2	6.52	5	0.10	5	98.5	5
3	6.48	5	0.10	5	98.4	5
4	6.48	5	0.09	5	98.7	5
5	6.58	5	0.11	5	98.3	5
6	6.54	5	0.10	5	98.5	5
7	6.52	5	0.10	5	98.5	5
8	6.46	5	0.10	5	98.5	5
9	6.60	5	0.06	4	99.0	4
10	6.58	5	0.14	5	97.8	5
11	6.54	5	0.16	5	97.5	5
12	6.49	5	0.16	5	97.5	5
13	6.47	5	0.18	5	97.2	5
14	6.50	5	0.19	5	97.1	5
15	6.52	5	0.20	5	96.9	5
16	6.46	5	0.24	5	96.3	5
17	6.48	5	0.25	5	96.1	5
18	6.52	5	0.25	5	96.1	5
19	6.54	5	0.26	5	96.0	5
20	6.53	5	0.27	5	95.8	5
21	6.50	5	0.22	5	96.5	5
22	6.51	5	0.22	5	96.7	5
23	6.44	2	0.17	2	97.4	2
AVERAGE FOR THE DAY	6.51	24	0.16	24	97.5	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.34	577	0.25	574	96.1	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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           ADIPIC ACID DEMONSTRATION

             SCRUBBER MODULE S-1

               OCTOBER 5, 1981

           E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0      6.38    5    0.16    5    97.5    5
    1      6.55    5    0.14    5    97.9    5
    2      6.33    5    0.13    5    97.9    5
    3      6.21    5    0.13    5    97.9    5
    4      6.27    5    0.14    5    97.8    5
    5      6.20    5    0.13    5    97.9    5
    6      6.21    5    0.17    5    97.3    5
    7      6.40    5    0.27    5    95.8    5
    8      6.39    5    0.24    5    96.3    5
    9      6.36    5    0.24    5    96.3    5
   10      6.30    5    0.26    5    95.9    5
   11      6.25    5    0.24    5    96.1    5
   12      6.20    5    0.28    5    95.5    5
   13      6.12    1    0.26    1    95.7    1
   14      6.12    5    0.27    5    95.6    5
   15      5.94    5    0.23    5    96.2    5
   16      5.87    5    0.21    5    96.4    5
   17      5.86    5            0            0
   18      5.87    5            0            0
   19      5.84    5            0            0
   20      5.88    5            0            0
   21      5.88    5            0            0
   22      5.85    5            0            0
   23      5.92    5            0            0

 AVERAGE
 FOR THE   6.13   24    0.21   17    96.8   16 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.33  577    0.25  567    96.0   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

Outlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

OCTOBER 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.72	5		0		0	
1	5.84	5		0		0	
2	5.93	5		0		0	
3	5.96	5		0		0	
4	5.98	5		0		0	
5	6.00	5		0		0	
6	6.09	5		0		0	
7	6.11	6		0		0	
8	6.15	5		0		0	
9	6.26	5		0		0	
10	6.29	5		0		0	
11	6.27	5		0		0	
12	6.24	5		0		0	
13	6.21	5		0		0	
14	6.26	5		0		0	
15	6.14	2	0.46	2	92.5	2	
16	6.39	5	0.46	5	92.7	5	
17	6.40	5	0.28	5	95.6	5	
18	6.36	5	0.31	5	95.1	5	
19	6.36	5	0.28	5	95.7	5	
20	6.42	6	0.27	6	95.8	6	
21	6.52	5	0.26	5	96.1	5	
22	6.57	5	0.22	5	96.7	5	
23	6.36	5	0.13	5	98.0	5	
AVERAGE FOR THE DAY	6.21	24	0.30	9	95.3	9	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.33	578	0.26	553	95.9	18	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Outlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

OCTOBER 7, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.66	1	0.11	1	98.3	1
1	6.42	5	0.20	5	96.8	5
2	6.40	5	0.21	5	96.7	5
3	6.41	6	0.26	6	96.0	6
4	6.40	5	0.23	5	96.4	5
5	6.47	5	0.25	5	96.2	5
6	6.45	5	0.28	5	95.6	5
7	6.61	5	0.36	5	94.6	5
8	6.57	5	0.52	5	92.1	5
9	6.53	5	0.57	5	91.3	5
10	6.57	5	0.56	5	91.5	5
11	6.57	5	0.51	5	92.3	5
12	6.50	5	0.93	5	85.6	5
13	6.47	5	0.59	5	90.9	5
14	6.43	3	0.55	3	91.5	3
15	**Daily span and zero**					
16	6.45	2	0.43	2	93.4	2
17	**Scrubber down @ 1820**					
18						
19						
20						
21						
22						
23						

AVERAGE FOR THE DAY	6.50	16	0.41	16	93.4	15 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.33	579	0.26	554	95.8	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-1

                         OCTOBER 8, 1981

              E(IN)   NO.  E(OUT) NO.  REDUC.  NO.
     HOUR     LB.SO2  OF   LB.SO2 OF    EFF.   OF
              /MMBTU  PTS  /MMBTU PTS    %     PTS

        0  Scrubber down
        1
        2
        3
        4
        5
        6     6.89    1    0.04   1    99.4    1      Scrubber up @ 0640
        7     6.68    5    0.10   5    98.4    5
        8     6.60    4    0.24   4    96.3    4
        9  Data acquisition system malfunction
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19     6.61    5    0.38   5    94.2    5
       20     6.61    5    0.38   5    94.2    5
       21
       22
       23

   AVERAGE
   FOR THE    6.68    5    0.23   5    95.8   4 HOURS OF MONITORING DATA
     DAY

   ROLLING
    30 DAY    6.33  572    0.27 547    95.8  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-1

OCTOBER 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.42	5	0.11	5	98.2	5
1	6.51	5	0.15	5	97.7	5
2	6.50	5	0.15	5	97.6	5
3	6.52	5	0.13	5	98.0	5
4	6.48	5	0.12	5	98.2	5
5	6.48	5	0.14	5	97.8	5
6	6.50	5	0.14	5	97.9	5
7	6.56	5	0.17	5	97.4	5
8	6.54	5	0.38	5	94.1	5
9	6.58	3	0.54	3	91.7	3
10						
11	6.49	5	0.79	5	87.9	5
12	6.29	5	0.77	5	87.7	5
13	6.41	5	0.85	5	86.7	5
14	6.41	4	0.92	4	85.6	4
15	6.36	1	0.77	1	87.9	1
16	6.30	5	0.85	5	86.4	5
17	6.20	5	0.46	5	92.6	5
18	6.14	5	0.39	5	93.6	5
19	6.19	3	0.34	3	94.5	3
20						
21						
22						
23 *	6.27	3	0.23	3	96.4	3
AVERAGE FOR THE DAY	6.41	20	0.42	20	93.7	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.34	573	0.28	548	95.7	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                      MAY 21, 1981

            E(IN)  NO. E(OUT) NO. REDUC. NO.
   HOUR    LB.SO2 OF  LB.SO2 OF   EFF.  OF
           /MMBTU PTS /MMBTU PTS   %    PTS

     0
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13              0   0.72   2          0
    14              0   0.93   2          0
    15              0   1.02   5          0
    16              0   0.97   5          0
    17              0   0.89   4          0
    18
    19              0   0.98   5          0
    20              0   0.97   5          0
    21              0   1.02   5          0
    22              0   1.19   5          0
    23              0   1.27   5          0

  AVERAGE
  FOR THE           0   1.00  10          0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
```

Scrubber start up @ 1320
Inlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 22, 1981

HOUR	F(IN) LB.SO2 /MMBTU	NO. OF PTS	F(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.22	5		0
1		0	1.17	5		0
2		0	1.20	5		0
3		0	1.21	5		0
4		0	1.27	5		0
5		0	1.26	5		0
6		0	1.26	5		0
7		0	1.27	5		0
8		0	1.23	4		0
9		0	1.22	2		0
10						
11		0	1.06	4		0
12		0	1.13	5		0
13		0	1.20	5		0
14		0	1.18	3		0
15		0	1.40	5		0
16						
17						
18		0	1.36	5		0
19		0	1.33	5		0
20		0	1.38	5		0
21		0	1.37	5		0
22		0	1.40	5		0
23		0	1.37	5		0
AVERAGE FOR THE DAY		0	1.26	21		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.36	6		0
1		0	1.52	5		0
2		0	1.62	5		0
3		0	1.67	5		0
4		0	1.71	5		0
5		0	1.70	5		0
6		0	1.62	5		0
7		0	1.68	5		0
8		0	1.62	5		0
9		0	1.69	5		0
10		0	1.63	5		0
11		0	1.59	5		0
12		0	1.58	5		0
13		0	1.53	5		0
14						
15		0	1.65	4		0
16		0	1.68	5		0
17		0	1.73	5		0
18		0	1.67	1		0
19		0	1.70	5		0
20		0	1.72	5		0
21		0	1.68	5		0
22		0	1.74	5		0
23		0	1.70	5		0
AVERAGE FOR THE DAY		0	1.64	23		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.73	5		0
1		0	1.71	5		0
2		0	1.69	5		0
3		0	1.70	5		0
4		0	1.80	5		0
5		0	1.75	5		0
6		0	1.75	5		0
7		0	1.67	5		0
8		0	1.69	5		0
9		0	1.65	5		0
10		0	1.73	5		0
11		0	1.76	5		0
12		0	1.79	5		0
13		0	1.73	5		0
14		0	1.73	4		0
15		0	1.85	5		0
16		0	1.93	5		0
17		0	2.23	5		0
18		0	1.70	3		0
19		0	1.57	4		0
20		0	1.42	5		0
21		0	1.35	5		0
22		0	1.35	5		0
23		0	1.35	5		0
AVERAGE FOR THE DAY		0	1.69	24		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 25, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.37	5		0
1		0	1.32	5		0
2		0	1.40	5		0
3		0	1.40	5		0
4		0	1.41	5		0
5		0	1.34	5		0
6		0	1.34	5		0
7		0	1.35	5		0
8		0	1.39	5		0
9		0	1.40	5		0
10		0	1.63	5		0
11		0	1.62	5		0
12		0	1.61	5		0
13		0	1.73	6		0
14		0	1.65	4		0
15		0	1.67	5		0
16		0	1.64	5		0
17		0	2.14	1		0
18						0
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY		0	1.52	18		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

Scrubber down @ 1635

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     MAY 26, 1981

          E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
  HOUR    LB.SO2 OF   LB.SO2 OF    EFF.   OF
          /MMBTU PTS  /MMBTU PTS    %     PTS

    0
    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18             0    1.99   2           0
   19             0    2.10   5           0
   20             0    2.13   5           0
   21             0    1.90   5           0
   22             0    1.56   5           0
   23             0    1.85   5           0

 AVERAGE
 FOR THE          0    1.92   6           0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY
 AVERAGE  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

Scrubber up @ 1835
Inlet O_2 monitor down

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                      MAY 27, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0               0    1.81    5            0
    1               0    1.71    5            0
    2               0    1.74    5            0
    3               0    1.74    5            0
    4               0    1.74    4            0
    5               0    1.77    5            0
    6               0    1.77    4            0
    7               0    1.88    5            0
    8               0    1.95    5            0
    9               0    2.04    5            0
   10               0    2.06    5            0
   11               0    2.01    2            0
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE            0    1.85   12          0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

Inlet O_2 monitor down

Boiler down @ 1115
Boiler up @ 1245
Scrubber down rest of day

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6		0	0.68	2		0
7		0	0.92	5		0
8		0	1.07	5		0
9		0	1.15	4		0
10						
11		0	1.30	4		0
12		0	1.45	5		0
13		0	1.63	5		0
14		0	1.60	2		0
15		0	1.52	4		0
16		0	1.50	7		0
17						
18						
19						
20						
21		0	1.54	1		0
22		0	1.62	5		0
23		0	1.68	5		0
AVERAGE FOR THE DAY		0	1.36	13		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

Scrubber up @ 0630
Inlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 29, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.42	5		0
1		0	1.35	5		0
2		0	1.32	5		0
3		0	1.35	5		0
4		0	1.34	5		0
5						
6		0	1.44	1		0
7		0	1.42	3		0
8		0	1.51	5		0
9		0	1.42	5		0
10		0	1.33	5		0
11		0	1.31	5		0
12		0	1.28	5		0
13		0	1.33	5		0
14						
15						
16						
17		0	1.25	4		0
18		0	1.32	5		0
19		0	1.33	5		0
20		0	1.36	5		0
21		0	1.33	5		0
22		0	1.22	7		0
23		0	1.00	1		0
AVERAGE FOR THE DAY		0	1.33	20		0 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

Inlet O_2 monitor down

Scrubber down @ 2310

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              ADIPIC ACID DEMONSTRATION

                SCRUBBER MODULE S-2

                    MAY 30, 1981

          E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
  HOUR    LB.SO2 OF   LB.SO2 OF    EFF.   OF
          /MMBTU PTS  /MMBTU PTS    %     PTS

    0
    1
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13             0    1.40   4           0
   14             0    1.34   5           0
   15
   16
   17             0    1.30   3           0
   18             0    1.30   5           0
   19             0    1.19   5           0
   20             0    1.21   5           0
   21             0    1.23   5           0
   22             0    1.24   5           0
   23             0    1.23   5           0

 AVERAGE
 FOR THE          0    1.27   9           0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

Scrubber up @ 1220
Inlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

MAY 31, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0		0	1.14	5		0
1		0	1.15	5		0
2		0	1.12	5		0
3		0	1.14	4		0
4		0	1.18	5		0
5		0	1.20	5		0
6		0	1.23	5		0
7		0	1.28	3		0
8						
9						
10		0	1.44	2		0
11		0	1.41	5		0
12		0	1.45	5		0
13		0	1.45	5		0
14		0	1.35	1		0
15						
16		0	1.28	5		0
17		0	1.40	5		0
18		0	1.39	5		0
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY		0	1.29	16		0 HOURS OF MONITORING DATA

Inlet O_2 monitor down

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

```
               ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-2

                    JUNE 1, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0
    1
    2
    3
    4
    5
    6              0    0.98   2             0
    7              0    1.12   1             0
    8              0    1.16   5             0
    9              0    1.18   5             0
   10              0    1.33   5             0
   11              0    1.54   5             0
   12              0    1.78   4             0
   13              0    1.78   4             0
   14
   15              0    1.66   4             0
   16
   17
   18
   19              0    1.92   1             0
   20
   21
   22
   23              0    1.33   1             0

 AVERAGE
 FOR THE           0    1.43  11             0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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Inlet O_2 monitor down

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     JUNE 2, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0              0    1.30    5            0
    1              0    1.33    6            0
    2              0    1.31    4            0
    3              0    1.36    5            0
    4              0    1.37    5            0
    5              0    1.41    5            0
    6              0    1.44    2            0
    7              0    1.50    5            0
    8              0    1.70    5            0
    9              0    1.71    5            0
   10              0    1.77    5            0
   11              0    1.78    5            0
   12              0    1.78    5            0
   13              0    1.80    5            0
   14     5.49     3    1.72    3    68.8    3
   15     5.37     5    1.74    4    67.4    4
   16     5.29     5    1.73    5    67.3    5
   17     5.27     5    1.76    5    66.5    5
   18     5.25     5    1.76    4    66.5    4
   19     5.26     5    1.75    5    66.8    5
   20     5.27     5    1.77    5    66.3    5
   21     5.31     5    1.79    5    66.2    5
   22     5.36     5    1.91    5    64.5    5
   23     5.36     5    1.92    5    64.1    5

 AVERAGE
 FOR THE  5.32    10    1.64   24    66.4   10 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
```

Inlet O_2 monitor down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.37	5	2.02	5	62.4	5	
1	5.44	3	2.02	3	62.8	3	
2	5.50	5	1.93	5	64.9	5	
3	5.43	5	1.70	5	68.7	5	
4	5.47	5	1.70	5	68.9	5	
5	5.47	5	1.66	5	69.6	5	
6	5.58	5	1.85	5	66.9	5	
7	5.61	5	2.29	5	59.1	5	
8	5.57	5	2.54	5	54.4	5	
9	5.56	5	2.45	5	56.0	5	
10	5.56	3	2.50	4	55.8	3	
11		0	2.32	5		0	Inlet O_2 monitor down
12		0	2.26	5		0	Inlet O_2 monitor down
13		0	2.26	5		0	Inlet O_2 monitor down
14	SO_2 stratification check						
15	SO_2 stratification check						
16	5.82	3	1.95	4	67.9	3	
17	5.96	5	2.24	5	62.4	5	
18	5.92	5	2.65	5	55.2	5	
19	5.93	5	2.30	5	61.2	5	
20	5.95	5	1.80	5	69.6	5	
21	6.04	5	1.72	5	71.5	5	
22	6.01	5	1.72	5	71.4	5	
23	5.98	2	2.05	2	65.8	2	
AVERAGE FOR THE DAY	5.69	19	2.09	22	63.9	19 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED						

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1		0	1.92	4		0
2		0	2.04	5		0
3	6.08	5	2.18	5	64.2	5
4	6.10	5	2.19	5	64.1	5
5	6.12	5	2.21	5	63.9	5
6	6.05	5	2.18	5	64.0	5
7	6.04	5	2.07	5	65.7	5
8	6.01	5	2.08	5	65.4	5
9	5.97	5	2.01	5	66.3	5
10	5.79	5	2.02	5	65.1	5
11	SO_2 stratification check					
12						
13						
14						
15	5.99	5	1.50	5	75.0	5
16	5.98	4	1.83	4	69.3	4
17	5.88	1	1.62	1	72.4	1
18	5.91	5	1.68	5	71.6	5
19	5.88	5	1.61	5	72.5	5
20	5.89	5	1.73	5	70.6	5
21	5.93	5	1.96	5	66.9	5
22	5.97	5	2.08	5	65.1	5
23	5.95	5	2.12	5	64.3	5
AVERAGE FOR THE DAY	5.97	17	1.95	19	67.1	16 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED					

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JUNE 5, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
 HOUR      LB.SO2  OF   LB.SO2  OF   EFF.   OF
           /MMBTU  PTS  /MMBTU PTS    %     PTS

   0
   1        5.95    5    1.92    5    67.8   5
   2        5.91    5    2.04    5    65.4   5
   3        5.71    5    2.01    5    64.7   5
   4        5.74    6    1.90    6    67.0   6
   5        5.66    5    2.00    5    64.6   5
   6        5.63    3    1.95    3    65.4   3
   7        5.52    5    1.94    5    64.8   5
   8        5.45    5    1.82    5    66.6   5
   9        5.39    5    1.84    5    65.8   5
  10        5.38    5    1.78    5    66.8   5
  11        5.40    5    1.59    5    70.5   5
  12        5.41    5    1.38    5    74.5   5
  13        5.44    5    1.32    5    75.8   5
  14        5.55    5    1.20    5    78.4   5
  15        5.50    5    1.14    5    79.3   5
  16        5.52    4    1.17    4    79.5   4
  17        5.61    3    1.21    3    78.4   3
  18        5.64    5    1.16    5    79.4   5
  19        5.74    5    1.15    5    79.9   5
  20        5.87    5    1.18    5    79.9   5
  21        5.94    5    1.21    5    79.6   5
  22        6.03    5    1.37    5    77.2   5
  23        5.94    5    1.14    5    80.9   5

AVERAGE
FOR THE     5.65   23    1.54   23    72.7  23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JUNE 6, 1981

            E(IN)    NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2    OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS     %     PTS

     0      5.88     5     0.84    5    85.7    5
     1      5.86     5     0.90    5    84.6    5
     2      5.89     5     0.93    5    84.2    5
     3      5.96     6     1.06    6    82.2    6
     4      5.95     5     0.88    5    85.2    5
     5      5.97     5     0.86    5    85.6    5
     6      5.96     5     0.85    5    85.8    5
     7      5.99     5     0.89    5    85.2    5
     8      6.08     5     0.90    5    85.2    5
     9      6.11     5     0.99    5    83.8    5
    10      6.14     3     1.03    3    83.2    3
    11      6.15     5     1.61    5    73.8    5
    12      6.15     5     1.73    5    71.8    5
    13      6.03     5     1.68    5    72.2    5
    14      6.04     4     1.57    4    73.9    4
    15      6.07     2     2.09    2    65.5    2
    16      6.18     1     2.57    1    58.5    1
    17      6.09     1     1.77    1    71.0    1
    18      6.10     5     1.75    5    71.4    5
    19      6.10     5     1.71    5    71.9    5
    20      6.15     5     1.72    5    72.1    5
    21      6.13     2     1.71    2    72.1    2
    22  Data acquisition system down
    23  Data acquisition system down

  AVERAGE
  FOR THE   6.04    22     1.37   22    78.8   20 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                      JUNE 7, 1981

          E(IN)  NO.  E(OUT) NO.  REDUC.  NO.
 HOUR    LB.SO2  OF   LB.SO2  OF   EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS   %     PTS

   0  Data acquisition system down
   1  Data acquisition system down
   2      5.93   2    1.16    2    80.4    2
   3      6.04   5    1.18    5    80.5    5
   4      5.99   5    1.12    5    81.2    5
   5      5.89   5    1.07    5    81.8    5
   6      5.93   5    1.08    5    81.8    5
   7      5.92   5    1.12    5    81.1    5
   8      5.91   5    1.12    5    81.1    5
   9      5.83   5    1.20    5    79.4    5
  10      5.78   5    1.13    5    80.4    5
  11      5.67   5    1.09    5    80.7    5
  12      5.67   5    1.11    5    80.4    5
  13      5.71   5    1.35    5    76.3    5
  14      5.81   5    1.75    5    69.9    5
  15      5.86   5    1.74    5    70.4    5
  16      5.93   4    1.69    4    71.5    4
  17      5.93   2    1.62    2    72.7    2
  18      5.88   5    1.57    5    73.4    5
  19      5.87   5    1.56    5    73.4    5
  20      5.82   5    1.58    5    72.9    5
  21      5.81   5    1.54    5    73.5    5
  22      5.80   5    1.53    5    73.5    5
  23      5.79   5    1.40    5    75.9    5

AVERAGE
FOR THE   5.85  22    1.35   22    76.9   22 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JUNE 8. 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0       5.62    5    1.16    5    79.3    5
    1       5.61    5    1.20    5    78.6    5
    2       5.68    5    1.36    5    76.0    5
    3       5.85    5    1.27    5    79.4    5
    4       5.78    5    1.27    5    78.1    5
    5       5.84    5    1.31    5    77.6    5
    6       5.78    5    1.30    5    77.4    5
    7       5.89    5    1.31    5    77.8    5
    8       5.99    5    1.70    5    71.6    5
    9       5.89    5    1.74    5    70.4    5
   10       5.82    5    1.70    5    70.7    5
   11       5.78    5    1.67    5    71.2    5
   12       5.90    5    1.77    5    70.0    5
   13       5.76    4    1.83    4    68.2    4
   14       5.85    4    1.91    4    67.3    4
   15       5.83    5    1.99    5    65.9    5
   16       5.73    5    2.17    5    62.6    5
   17       6.45    3    2.31    3    63.7    3
   18       5.89    5    2.40    5    59.1    5
   19       5.85    5    2.63    5    55.0    5
   20       5.85    5    2.66    5    54.5    5
   21       5.89    5    2.69    5    54.3    5
   22       5.92    5    2.66    5    55.0    5
   23       5.98    4    2.52    4    57.9    4

AVERAGE
FOR THE     5.85   24    1.86   24    68.4   24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE. FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                       JUNE 9, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS    %     PTS

       0       5.82    4    2.24    4    61.5    4
       1       5.84    5    2.22    5    61.9    5
       2       5.92    5    2.27    5    61.7    5
       3       5.97    5    2.32    5    61.2    5
       4       5.91    5    2.32    5    60.8    5
       5       5.95    5    2.35    5    60.3    5
       6       6.00    5    2.43    5    59.4    5
       7       6.02    5    2.53    5    58.0    5
       8       6.04    5    2.78    5    53.9    5
       9       6.07    5    2.85    5    52.9    5
      10       6.03    5    2.69    4    55.4    4
      11       5.94    5    2.50    5    57.9    5
      12       5.91    5    2.47    5    58.3    5
      13       5.89    5    2.44    5    58.5    5
      14       5.98    5    2.48    5    58.5    5
      15       5.99    5    2.48    5    58.5    5
      16       5.91    5    2.45    5    58.6    5
      17       5.95    2    2.45    2    58.5    5
      18       5.97    5    2.48    5    58.8    2
      19       6.02    5    2.56    5    58.4    5
      20       5.99    5    2.54    5    57.4    5
      21       6.01    5    2.50    5    57.6    5
      22       6.03    5    2.50    5    58.3    5
      23       6.06    5    2.16    5    58.6    5
                                         64.4    5

  AVERAGE
  FOR THE      5.97   24    2.46   24    58.8  24 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.97	5	1.64	5	72.6	5	
1	5.90	5	1.56	5	73.5	5	
2	5.86	5	1.50	5	74.4	5	
3	5.88	5	1.58	5	73.1	5	
4	5.91	5	1.61	5	72.7	5	
5	5.90	5	1.63	5	72.4	5	
6	5.92	5	1.63	5	72.5	5	
7	5.90	5	1.58	5	73.2	5	
8	5.73	5	1.57	5	72.6	5	
9	5.91	5	1.67	5	71.8	5	
10	5.95	5	1.72	5	71.1	5	
11	6.00	5	1.93	5	67.9	5	
12	5.86	5	1.62	5	72.3	5	
13	5.85	5	1.37	5	76.6	5	
14	5.89	5	1.41	5	76.1	5	
15							
16	5.77	1	1.73	1	70.0	1	
17	5.79	5	1.80	5	68.9	5	
18	5.95	5	1.74	5	70.8	5	
19	5.99	5	1.70	5	71.6	5	
20	5.98	5	1.69	5	71.7	5	
21	5.91	5	1.64	5	72.3	5	
22	5.78	5	1.53	5	73.5	5	
23	5.77	3	1.50	3	74.0	3	Scrubber down @ 2336
AVERAGE FOR THE DAY	5.89	23	1.62	23	72.5	22 HOURS OF MONITORING DATA	

ROLLING 30 DAY AVERAGE   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JUNE 11, 1981

             E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0   Scrubber down
     1        |
     2        |
     3        |
     4        |
     5        |
     6        |
     7        |
     8        |
     9        |
    10        |
    11        |
    12        V
    13      6.23     1    1.24    1    80.1    1      Scrubber up @ 1210
    14
    15
    16      5.94     3    1.49    3    74.8    3
    17      6.02     5    1.74    5    71.1    5
    18      6.03     5    1.97    5    67.3    5
    19      6.02     5    2.09    5    65.3    5
    20      6.10     4    2.29    4    62.5    4      Scrubber down @ 2050
    21               0            0            0
    22               0            0            0
    23      5.97     4    2.28    4    61.8    4      Scrubber up @ 2310

 AVERAGE
 FOR THE    6.04     7    1.87    7    67.1   6 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.81	5	2.27	5	61.0	5
1	5.80	5	2.09	5	64.0	5
2	5.77	5	2.03	5	64.8	5
3	5.61	4	1.95	4	65.1	4
4	5.68	5	1.94	5	65.8	5
5	5.73	5	1.93	5	66.3	5
6	5.82	3	2.01	3	65.5	3
7	5.94	5	2.26	5	62.0	5
8	6.07	3	2.44	3	59.7	3
9	5.98	5	2.66	5	55.5	5
10	6.01	5	2.43	5	59.5	5
11	5.97	4	2.34	4	60.8	4
12	5.89	2	2.28	2	61.3	2
13						
14	5.82	5	2.04	5	65.0	5
15	5.76	5	1.88	5	67.3	5
16	5.75	5	2.02	5	65.0	5
17	5.72	4	2.57	5	58.0	4
18	5.76	5	2.49	5	56.8	5
19	5.81	5	2.47	5	57.4	5
20	5.69	5	2.43	5	57.2	5
21	5.65	1	2.24	1	60.4	1
22	Scrubber down at 2310					
23						

AVERAGE FOR THE DAY	5.81	21	2.23	21	61.9	20 HOURS OF MONITORING DATA

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JUNE 13, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
               /MMBTU  PTS  /MMBTU  PTS    %     PTS

        0
        1               0            0            0     Scrubber down all day
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19
       20
       21
       22
       23
       .

    AVERAGE
    FOR THE
      DAY              0            0           0 HOURS OF MONITORING DATA


    ROLLING
     30 DAY
    AVERAGE    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                         JUNE 14, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

      0
      1              0            0            0     Scrubber down all day
      2
      3
      4
      5
      6
      7
      8
      9
     10
     11
     12
     13
     14
     15
     16
     17
     18
     19
     20
     21
     22
     23

   AVERAGE
   FOR THE           0            0            0 HOURS OF MONITORING DATA
     DAY

   ROLLING
    30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
   AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     JUNE 15, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
              /MMBTU  PTS  /MMBTU  PTS    %     PTS

        0                                                Scrubber down all day
        1              0            0            0
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19
       20
       21
       22
       23


    AVERAGE
    FOR THE            0            0           0 HOURS OF MONITORING DATA
      DAY

    ROLLING
     30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
    AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JUNE 16, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1              0            0            0      Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE            0            0          0 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JUNE 17, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0                                                 Scrubber down all day
     1               0            0            0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE             0            0            0 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JUNE 18, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC. NO.
   HOUR     LB.SO2 OF   LB.SO2 OF    EFF.  OF
            /MMBTU PTS  /MMBTU PTS    %    PTS

     0                                              Scrubber down all day
     1               0           0           0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


  AVERAGE
  FOR THE            0           0           0 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 19, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1		0		0		0	Scrubber down all day
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
AVERAGE FOR THE DAY		0		0		0 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED						

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     JUNE 20, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC. NO.
 HOUR      LB.SO2  OF   LB.SO2  OF    EFF.  OF
           /MMBTU  PTS  /MMBTU  PTS    %    PTS

   0
   1                0            0           0      Scrubber down all day
   2
   3
   4
   5
   6
   7
   8
   9
  10
  11
  12
  13
  14
  15
  16
  17
  18
  19
  20
  21
  22
  23


AVERAGE
FOR THE
  DAY               0            0          0 HOURS OF MONITORING DATA


ROLLING
 30 DAY
AVERAGE     NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
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D-373

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     JUNE 21, 1981

                 E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
      HOUR      LB.SO2   OF   LB.SO2  OF    EFF.   OF
                /MMBTU  PTS  /MMBTU  PTS     %     PTS

        0
        1                 0            0            0      Scrubber down all day
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19
       20
       21
       22
       23

     AVERAGE
     FOR THE
       DAY            0            0               0 HOURS OF MONITORING DATA

     ROLLING
      30 DAY
     AVERAGE    NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
```

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JUNE 22, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0                                              Scrubber down all day
     1              0            0            0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

  AVERAGE
  FOR THE           0            0           0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
  AVERAGE
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```
             ADIPIC ACID DEMONSTRATION

               SCRUBBER MODULE S-2

                  JUNE 23, 1981

          E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2 OF   LB.SO2  OF    EFF.   OF
          /MMBTU PTS  /MMBTU  PTS    %     PTS

   0                                             Scrubber down all day
   1              0            0           0
   2
   3
   4
   5
   6
   7
   8
   9
  10
  11
  12
  13
  14
  15
  16
  17
  18
  19
  20
  21
  22
  23

AVERAGE
FOR THE           0            0           0 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	Scrubber down						
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15	5.64	2	1.70	2	69.8	2	Scrubber up @ 1435
16	5.72	4	1.23	4	78.4	4	
17	5.77	5	1.33	5	77.0	5	
18	5.75	5	1.18	5	79.6	5	
19	5.78	5	1.14	5	80.3	5	
20	5.75	5	1.19	5	79.3	5	
21	5.80	5	1.39	5	76.0	5	
22	5.77	5	1.50	5	74.0	5	
23	5.74	5	1.53	5	73.4	5	
AVERAGE FOR THE DAY	5.75	9	1.35	9	76.4	9 HOURS OF MONITORING DATA	

ROLLING 30 DAY AVERAGE NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JUNE 25, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0     5.85     5    1.48    5    74.7    5
    1     5.82     5    1.47    5    74.7    5
    2     5.83     5    1.53    5    73.7    5
    3     5.81     5    1.47    5    74.7    5
    4     5.77     7    1.44    7    75.0    7
    5     5.79     5    1.42    5    75.4    5
    6     5.82     6    1.43    6    75.5    6
    7     5.84     5    1.40    5    76.0    5
    8     5.89     5    1.18    5    79.9    5
    9     5.87     1    1.18    1    79.9    1
   10  Daily span and zero
   11     5.66     4    1.07    4    81.1    4
   12     5.81     5    1.29    5    77.8    5
   13     5.87     5    1.29    5    78.0    5
   14     5.84     5    1.27    5    78.2    5
   15     5.81     5    0.45    5    92.3    5
   16     5.87     2    0.59    2    90.0    2
   17     5.84     5    1.32    5    77.5    5
   18     5.83     5    1.50    5    74.3    5
   19     5.85     5    1.20    5    79.5    5
   20     5.84     5    1.15    5    80.3    5
   21     5.87     5    1.05    5    82.2    5
   22     5.88     5    0.91    5    84.5    5
   23     5.83     4    0.86    4    85.2    4


AVERAGE
FOR THE   5.83    23    1.22   23    79.1   22 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JUNE 26, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0
    1       5.90    4    0.60    4    89.8    4
    2       5.85    5    0.64    5    89.1    5
    3       5.80    4    0.62    4    89.3    4
    4       5.80    5    0.62    5    89.4    5
    5       5.82    5    0.62    5    89.4    5
    6       5.79    5    0.67    5    88.5    5
    7       5.81    5    0.71    5    87.8    5
    8       5.78    5    0.79    5    86.3    5
    9       5.77    5    0.73    5    87.4    5
   10       5.73    3    0.77    3    86.6    3
   11   SO2 stratification check
   12       5.69    5    0.56    5    90.3    5
   13   Data acquisition system down
   14   Data acquisition system down
   15       5.58    5    0.76    5    86.4    5
   16       5.69    5    0.73    5    87.1    5
   17       5.72    6    0.68    6    88.0    6
   18       5.79    3    0.28    3    95.2    3
   19       5.83    5    0.66    5    88.7    5
   20       5.85    5    0.60    5    89.7    5
   21       5.92    5    0.63    5    89.4    5
   22       5.91    5    0.56    5    90.6    5
   23       5.94    5    0.56    5    90.6    5

 AVERAGE
 FOR THE    5.80   20    0.64   20    89.0   20 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
 AVERAGE
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             ADIPIC ACID DEMONSTRATION

                SCRUBBER MODULE S-2

                   JUNE 27, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS   /MMBTU  PTS    %     PTS

   0       6.06    5     0.54    5    91.0    5
   1       5.97    5     0.54    5    91.0    5
   2       5.98    5     0.56    5    90.6    5
   3       6.02    5     0.55    5    90.9    5
   4       5.95    5     0.52    5    91.3    5
   5       6.00    5     0.52    5    91.3    5
   6       6.00    5     0.51    5    91.5    5
   7       6.03    3     0.52    3    91.4    3
   8   Data acquisition system down
   9       6.11    2     0.71    2    88.5    2
  10       6.04    3     0.73    3    87.9    3
  11   Daily span and zero
  12       5.69    2     0.38    2    93.3    2
  13       5.71    5     0.41    5    92.7    5
  14       5.62    5     0.39    5    93.1    5
  15       5.56    5     0.35    5    93.6    5
  16       5.58    5     0.29    5    94.8    5
  17       5.57    5     0.33    5    94.1    5
  18       5.54    5     0.37    5    93.3    5
  19       5.55    5     0.33    5    94.0    5
  20       5.60    5     0.19    5    96.6    5
  21       5.65    5     0.17    5    97.1    5
  22       5.67    5     0.19    5    96.6    5
  23       5.70    5     0.22    5    96.1    5

AVERAGE
FOR THE    5.80   22     0.42   22    92.8   22 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JUNE 28, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS     %     PTS

    0      5.67    5     0.26   5     95.4    5
    1      5.77    5     0.27   5     95.4    5
    2      5.71    5     0.29   5     94.9    5
    3      5.72    5     1.16   5     79.5    5
    4      5.69    5     0.32   5     94.3    5
    5      5.74    5     0.28   5     95.2    5
    6      5.79    5     0.28   5     95.2    5
    7      5.79    5     0.32   5     94.5    5
    8      5.90    5     0.35   5     94.1    5
    9      5.97    4     0.32   4     94.7    4
   10      5.88    4     0.27   4     95.4    4
   11      5.90    4     0.35   4     94.1    4
   12      5.91    5     0.22   5     96.3    5
   13      5.83    5     0.22   5     96.2    5
   14      5.92    5     0.17   5     97.2    5
   15      5.91    5     0.22   5     96.3    5
   16      5.97    5     0.22   5     96.2    5
   17      5.93    4     0.28   4     95.3    4
   18      5.91    5     0.23   5     96.1    5
   19      5.91    5     0.23   5     96.1    5
   20      5.89    5     0.22   5     96.3    5
   21      5.86    5     0.23   5     96.0    5
   22      5.88    5     0.22   5     96.2    5
   23      5.90    5     0.24   5     96.0    5


AVERAGE
FOR THE    5.85   24     0.30  24     94.9   24 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   NOT APPLICABLE, FEWER THAN 30 BOILER OPERATING DAYS HAVE OCCURRED
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JUNE 29, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.99	5	0.23	5	96.2	5	
1	5.99	5	0.22	5	96.3	5	
2	5.96	5	0.21	5	96.4	5	
3	5.94	5	0.27	5	95.5	5	
4	5.88	5	0.29	5	95.1	5	
5	5.91	5	0.29	5	95.1	5	
6	5.92	5	0.30	5	95.0	5	
7	6.01	4	0.29	4	95.1	4	
8	5.94	2	0.23	2	96.1	2	
9	5.92	5	0.20	5	96.6	5	
10	5.85	5	0.17	5	97.2	5	
11	5.85	5	0.18	5	97.0	5	
12	5.82	5	0.17	5	97.0	5	
13	5.79	5	0.17	5	97.1	5	
14	5.76	5	0.11	5	98.1	5	
15	5.75	5	0.09	5	98.5	5	
16	5.76	3	0.08	3	98.6	3	
17	Daily span and zero						
18	Daily span and zero						
19	5.66	5	0.11	5	98.0	5	
20	5.70	5	0.12	5	97.9	5	
21	5.68	5	0.10	5	98.2	5	
22	5.72	5	0.11	5	98.1	5	
23	5.84	2	0.18	2	96.9	2	
AVERAGE FOR THE DAY	5.85	22	0.19	22	96.8		22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.82	281	1.36	471	76.7		11 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                     JUNE 30. 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0       5.87     5    0.19    5    96.8    5
     1       6.07     5    0.18    5    97.0    5
     2       5.75     5    0.14    5    97.6    5
     3       5.88     5    0.14    5    97.7    5
     4       5.86     5    0.13    5    97.8    5
     5       5.87     5    0.14    5    97.6    5
     6       5.90     5    0.15    5    97.4    5
     7       5.98     5    0.13    5    97.8    5
     8       5.79     5    0.13    5    97.7    5
     9       5.96     5    0.14    5    97.7    5
    10       6.12     5    0.22    5    96.4    5
    11       6.14     6    0.31    6    94.9    6
    12       6.22     5    0.22    5    96.5    5
    13       6.31     5    0.24    5    96.2    5
    14       6.17     5    0.25    5    95.9    5
    15       6.16     4    0.24    4    96.0    4
    16       6.38     5    0.26    5    95.9    5
    17                0    0.98    1            0
    18       6.29     5    0.26    5    95.8    5
    19       6.30     6    0.40    6    93.6    6
    20       6.28     5    0.26    5    95.9    5
    21       6.33     5    0.27    5    95.8    5
    22       6.34     5    0.22    5    96.5    5
    23


 AVERAGE
 FOR THE     6.09    22    0.24   23    96.6   22 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY     5.84   303    1.31  494    77.6   12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 1, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.16	5	0.15	5	97.6	5	
1	6.28	5	0.17	5	97.3	5	
2	6.29	5	0.15	5	97.7	5	
3	6.30	5	0.16	5	97.4	5	
4	6.29	5	0.14	5	97.7	5	
5	6.30	5	0.16	5	97.5	5	
6	Data acquisition system down						
7	Data acquisition system down						
8	6.30	5	0.28	5	95.6	5	
9	6.32	5	0.30	4	95.3	4	
10	6.35	4	0.24	4	96.2	4	
11	6.29	5	0.20	5	96.9	5	
12	6.28	5	0.17	5	97.4	5	
13	6.27	5	0.15	5	97.6	5	
14	6.30	2	0.18	2	97.1	2	
15							
16							Scrubber down @ 1615
17							
18	6.43	4	0.36	4	94.5	4	Scrubber up @ 1650
19	6.34	5	0.34	5	94.7	5	
20	6.33	5	0.33	5	94.7	5	
21	6.31	5	0.32	5	94.9	5	
22	6.35	5	0.38	5	93.9	5	
23	6.24	5	0.37	5	94.1	5	
AVERAGE FOR THE DAY	6.30	19	0.24	19	96.2	19 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.87	322	1.27	503	78.3	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.32	5	0.33	5	94.8	5
1	6.12	5	0.29	5	95.2	5
2	6.27	5	0.23	5	96.4	5
3	6.31	5	0.27	5	95.7	5
4	6.38	5	0.35	5	94.5	5
5	6.43	5	0.37	5	94.3	5
6	6.44	6	0.46	6	92.8	6
7	6.49	5	0.42	5	93.5	5
8	6.52	5	0.42	5	93.6	5
9	6.55	5	0.50	5	92.3	5
10	6.57	5	0.68	5	89.7	5
11	**Daily span and zero**					
12	**SO_2 calibration check**					
13	6.33	3	0.95	3	85.0	3
14	6.27	5	0.92	5	85.3	5
15	6.28	5	0.90	5	85.6	5
16	6.29	5	0.94	5	85.1	5
17	6.36	5	1.19	5	81.3	5
18	6.37	3	1.46	3	77.1	3
19	6.36	2	0.94	2	85.3	2
20	6.46	4	2.38	4	63.1	4
21	6.54	5	1.77	5	73.0	5
22	6.54	5	1.74	5	73.3	5
23	6.50	5	1.05	5	83.9	5
AVERAGE FOR THE DAY	6.40	22	0.84	22	86.9	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.90	344	1.26	504	78.7	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.51	3	0.73	3	88.8	3	
1	6.56	5	0.74	5	88.7	5	
2	6.48	5	0.59	5	90.9	5	
3	6.42	5	0.50	5	92.3	5	
4	6.40	5	0.48	5	92.5	5	
5	6.35	5	0.50	5	92.1	5	
6	6.35	5	0.48	5	92.4	5	
7	6.31	5	0.51	5	91.9	5	
8	6.26	5	0.54	5	91.4	5	
9	6.22	5	0.54	5	91.4	5	
10	6.22	5	0.93	5	85.1	5	
11	6.14	4	0.91	4	85.2	4	
12	**Scrubber down @ 1200**						
13	6.01	5	0.86	5	85.7	5	**Scrubber up @ 1240**
14							
15							
16							
17	5.74	1	0.56	1	90.3	1	
18	5.84	5	0.56	5	90.5	5	
19	**Data acquisition system down**						
20							
21							
22							
23							
AVERAGE FOR THE DAY	6.25	15	0.63	15	89.9		14 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.92	359	1.22	496	79.4		14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							Scrubber down @ 0300
2							Scrubber up @ 0345
3							
4							
5							
6							
7	6.10	4	0.49	4	92.0	4	
8	Data acquisition system down						
9	6.11	4	0.47	4	92.4	4	
10	6.07	5	0.50	5	91.8	5	
11	Data acquisition system down						
12	Data acquisition system down						
13	6.06	4	0.50	4	91.8	4	
14	6.07	2	0.46	2	92.5	2	
15							
16	6.10	5	0.60	5	90.2	5	
17	6.09	5	0.57	5	90.7	5	
18	6.12	5	0.58	5	90.6	5	
19	6.40	5	0.56	5	91.3	5	
20	6.39	6	0.58	6	90.9	6	
21							
22							Scrubber down @ 2055
23	6.27	5	0.25	5	96.0	5	Scrubber up @2300
AVERAGE FOR THE DAY	6.16	11	0.50	11	91.8	11 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.93	370	1.18	483	80.1	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.36	5	0.34	5	94.6	5
1	6.37	5	0.34	5	94.7	5
2	6.34	5	0.36	5	94.4	5
3	6.33	5	0.39	5	93.8	5
4	6.40	5	0.42	5	93.5	5
5	6.42	5	0.41	5	93.6	5
6	6.40	5	0.43	5	93.3	5
7	6.40	5	0.43	5	93.4	5
8	6.44	5	0.43	5	93.4	5
9	6.43	5	0.42	5	93.5	5
10	6.38	5	0.43	5	93.3	5
11	6.25	5	0.39	5	93.8	5
12	6.22	5	0.47	5	92.5	5
13	6.09	5	0.46	5	92.4	5
14	6.12	1	0.38	1	93.8	1
15	6.13	5	0.39	5	93.6	5
16	6.12	5	0.39	5	93.6	5
17	6.14	5	0.38	5	93.8	5
18	6.15	5	0.36	5	94.1	5
19	6.20	5	0.36	5	94.1	5
20	6.21	5	0.35	5	94.4	5
21	6.28	5	0.34	5	94.5	5
22	6.28	5	0.33	5	94.7	5
23	6.29	5	0.32	5	94.9	5
AVERAGE FOR THE DAY	6.28	24	0.39	24	93.8	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.95	394	1.13	489	81.0	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.33	4	0.39	4	93.9	4	
1	6.33	4	0.24	4	96.2	4	
2	6.32	5	0.22	5	96.5	5	
3	6.29	5	0.27	5	95.8	5	
4	6.34	5	0.25	5	96.1	5	
5	6.33	5	0.27	5	95.8	5	
6	Data acquisition system down						
7	Data acquisition system down						
8	Data acquisition systbm down						
9	6.42	1	0.73	1	88.7	1	Scrubber down @ 0900
10							
11							
12							
13							
14	6.15	5	1.25	5	79.7	5	Scrubber up @ 1335
15	6.21	5	0.78	5	87.5	5	
16	6.37	5	0.49	5	92.4	5	
17	6.43	5	0.51	5	92.0	5	
18	6.40	3	0.91	3	85.8	3	
19	6.38	5	0.56	5	91.3	5	
20	6.42	5	0.67	5	89.5	5	
21	6.45	5	0.66	5	89.7	5	
22	6.47	5	0.64	5	90.1	5	
23	6.40	5	0.44	5	93.1	5	
AVERAGE FOR THE DAY	6.35	17	0.54	17	91.6	16 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.96	411	1.10	500	81.6	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JULY 7, 1981

           E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

   0       6.40    5    0.29    5    95.5    5
   1       6.37    4    0.35    4    94.6    4
   2       6.34    5    0.34    5    94.6    5
   3       6.28    5    0.32    5    94.9    5
   4       6.35    5    0.31    5    95.1    5
   5       6.38    5    0.32    5    95.0    5
   6       6.35    5    0.36    5    94.4    5
   7       6.38    5    0.37    5    94.3    5
   8       6.34    5    0.56    5    91.2    5
   9       6.28    5    0.49    5    92.2    5
  10       6.34    5    0.51    5    92.0    5
  11       6.38    5    0.63    5    90.1    5
  12       6.32    5    0.79    5    87.5    5
  13       6.30    5    0.77    5    87.7    5
  14       6.32    5    0.74    5    88.3    5
  15       6.33    4    0.75    4    88.1    4
  16       6.37    4    0.72    4    88.7    4
  17       6.43    5    0.74    5    88.5    5
  18       6.41    5    0.73    5    88.6    5
  19       6.42    5    0.73    5    88.6    5
  20       6.47    5    0.82    5    87.3    5
  21       6.45    5    0.85    5    86.9    5
  22       6.48    5    0.84    5    87.0    5
  23


AVERAGE
FOR THE   6.37   23    0.58   23    90.9   23 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY   5.99  434    1.07  510    82.2   16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JULY 8. 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0
     1       6.41     5    0.39    5    93.9    5
     2       6.27     5    0.42    5    93.3    5
     3       6.41     5    0.45    5    93.0    5
     4       6.34     5    0.47    5    92.6    5
     5       6.42     5    0.45    5    93.0    5
     6       6.44     5    0.69    5    89.3    5
     7       6.74     5    0.84    5    87.5    5
     8       6.56     5    1.16    5    82.2    5
     9       6.47     5    1.38    5    78.7    5
    10       6.40     5    1.05    5    83.5    5
    11       6.38     5    1.11    5    82.6    5
    12       6.32     5    1.42    5    77.5    5
    13   Data acquisition system down
    14       6.28     2    1.44    2    77.1    2
    15       6.36     5    1.42    5    77.7    5
    16       6.38     5    1.41    5    78.0    5
    17       6.37     3    1.41    3    77.9    3
    18       6.35     3    1.66    4    77.0    3
    19       6.35     4    1.47    4    76.9    4
    20       6.35     5    1.17    5    81.5    5
    21       6.33     5    0.90    5    85.8    5
    22       6.32     5    0.82    5    87.1    5
    23       6.39     5    0.81    5    87.4    5


  AVERAGE
  FOR THE    6.39    22    1.02   22    84.2   22 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY    6.01   456    1.06  512    82.4   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.48	5	0.83	5	87.2	5
2	6.53	5	0.78	5	88.1	5
3	6.55	5	0.78	5	88.1	5
4	6.54	5	0.81	5	87.7	5
5	6.52	5	0.84	5	87.2	5
6	6.55	5	0.84	5	87.2	5
7	6.60	5	0.86	5	87.0	5
8	6.71	6	0.90	6	86.6	6
9	6.60	6	1.03	6	84.4	6
10	6.47	5	1.42	5	78.0	5
11	6.39	5	1.54	5	76.0	5
12	6.34	5	1.50	5	76.3	5
13	Data acquisition system down					
14	6.30	3	1.31	4	76.9	3
15	6.40	1	1.49	1	76.7	1
16	Daily span and zero					
17	6.40	3	1.22	3	81.0	3
18	6.47	5	1.38	5	78.6	5
19	6.51	5	1.22	5	81.3	5
20	6.48	5	0.78	5	88.0	5
21	6.43	5	0.70	4	89.1	4
22	6.58	5	0.51	5	92.3	5
23	6.46	5	0.41	5	93.7	5
AVERAGE FOR THE DAY	6.49	21	1.01	21	84.7	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.03	477	1.05	524	82.6	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.41	5	0.22	5	96.6	5
1	6.43	5	0.23	5	96.5	5
2	6.52	5	0.24	5	96.3	5
3	6.48	5	0.25	3	96.1	5
4	6.48	5	0.29	5	95.5	5
5	6.54	5	0.26	5	96.1	5
6	6.51	5	0.33	5	95.0	5
7	6.55	5	0.33	5	94.9	5
8	6.51	5	0.28	5	95.7	5
9	6.57	5	0.39	5	94.0	5
10	6.49	5	0.56	5	91.4	5
11	6.38	4	0.86	4	86.5	4
12	6.36	5	0.78	5	87.8	5
13	6.32	5	0.75	5	88.1	5
14	6.47	5	0.67	5	89.7	5
15	6.24	1	0.03	2	99.6	1
16	**Data acquisition system down**					
17						
18	**Daily span and zero**					
19	6.35	4	0.62	4	90.2	4
20	6.41	5	0.58	5	90.9	5
21	6.44	5	0.77	5	88.0	5
22	6.39	5	0.94	5	85.3	5
23	6.48	5	0.92	5	85.8	5
AVERAGE FOR THE DAY	6.44	21	0.49	21	92.0	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.04	498	1.02	529	83.1	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1	6.44	5	0.87	5	86.5	5
2	6.52	5	0.66	5	89.8	5
3	6.45	5	0.63	5	90.2	5
4	6.46	5	0.61	5	90.5	5
5	6.48	5	0.58	5	91.0	5
6	6.45	5	0.55	5	91.4	5
7	6.47	5	0.49	5	92.4	5
8	6.46	5	0.63	5	90.3	5
9	6.41	5	1.06	5	83.5	5
10	6.35	3	1.09	3	82.9	3
11	6.26	2	1.10	2	82.3	2
12	6.30	5	1.04	5	83.5	5
13	6.20	5	0.96	5	84.5	5
14	6.33	5	0.89	5	85.9	5
15	6.36	5	0.85	5	86.7	5
16	6.38	4	0.80	4	87.5	4
17	**Daily span and zero**					
18	6.39	4	0.72	4	88.7	4
19	6.36	5	0.74	5	88.4	5
20	6.47	5	0.69	5	89.5	5
21	6.40	5	0.70	5	89.0	5
22	6.42	5	0.78	5	87.8	5
23	6.37	5	0.53	5	91.6	5
AVERAGE FOR THE DAY	6.40	22	0.77	22	87.9	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.06	520	1.00	540	83.5	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.40	5	0.37	5	94.2	5
1	6.37	5	0.29	5	95.5	5
2	6.32	5	0.65	5	89.7	5
3	6.35	5	0.37	5	94.2	5
4	6.38	5	0.47	5	92.7	5
5						
6						
7	6.32	5	0.39	5	93.9	5
8	Daily span and zero					
9	6.30	5	0.69	5	89.1	5
10	6.29	5	0.66	5	89.5	5
11	6.27	4	0.60	4	90.4	4
12						
13	6.31	5	0.81	5	87.2	5
14	6.33	5	0.81	5	87.2	5
15	6.33	5	0.76	5	88.0	5
16	6.32	3	0.70	3	88.9	3
17	6.36	3	0.70	3	89.0	3
18	6.32	5	0.64	5	89.8	5
19	6.30	5	0.62	5	90.2	5
20	6.32	5	0.59	5	90.6	5
21	6.39	4	0.59	4	90.7	4
22	6.39	4	0.66	4	89.7	4
23	6.42	5	0.73	5	88.6	5
AVERAGE FOR THE DAY	6.34	20	0.60	20	90.5	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.08	530	0.96	536	84.3	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 13, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	**Data acquisition system down**					
1	**Data acquisition system down**					
2	6.47	4	0.65	4	90.0	4
3	6.37	5	0.64	5	90.0	5
4	6.48	5	0.68	5	89.6	5
5	6.48	5	0.68	5	89.5	5
6	6.47	5	0.74	5	88.5	5
7	6.43	5	0.75	5	88.3	5
8	6.41	5	0.65	5	89.8	5
9	6.38	5	0.53	5	91.7	5
10	6.32	5	0.56	5	91.2	5
11	6.29	5	0.65	5	89.7	5
12	6.24	5	0.64	5	89.8	5
13	6.32	5	0.65	5	89.7	5
14	6.34	5	0.68	5	89.3	5
15	6.37	5	0.67	5	89.4	5
16	6.37	4	0.65	4	89.8	4
17	6.36	4	0.69	4	89.2	4
18	6.42	5	0.68	5	89.4	5
19	6.38	5	0.71	5	88.9	5
20	6.39	4	0.73	4	88.6	4
21	6.42	5	0.75	5	88.3	5
22	6.45	5	0.72	5	88.9	5
23	6.46	5	0.74	5	88.5	5
AVERAGE FOR THE DAY	6.39	22	0.67	22	89.5	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.11	533	0.90	536	85.3	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.51	5	0.70	5	89.2	5	
1	6.55	5	0.66	5	90.0	5	
2	Data acquisition system down						
3							
4							
5							
6							
7							
8	6.23	2	0.61	2	90.2	2	
9	6.34	5	0.60	5	90.5	5	
10	6.57	5	0.59	5	91.0	5	
11	6.31	5	0.61	5	90.3	5	
12	6.25	5	0.55	5	91.1	5	
13	6.24	4	0.44	4	93.0	4	
14	6.24	6	0.43	6	93.1	6	
15	6.28	5	0.43	5	93.2	5	
16	6.31	4	0.56	4	91.1	4	
17	6.32	5	0.56	5	91.2	5	
18	6.30	5	0.73	5	88.4	5	
19	6.26	5	0.76	5	87.8	5	
20	6.30	5	0.69	5	89.0	5	
21	6.27	5	0.62	5	90.1	5	
22	6.30	5	0.50	5	92.1	5	
23	6.29	5	0.45	5	92.9	5	
AVERAGE FOR THE DAY	6.33	18	0.58	18	90.8	18 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.12	534	0.85	535	86.1	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 15, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.30	5	0.37	5	94.1	5
1	6.36	5	0.23	5	96.4	5
2	6.13	5	0.23	5	96.3	5
3	6.14	5	0.23	5	96.3	5
4	6.09	5	0.21	5	96.5	5
5	6.08	5	0.21	5	96.6	5
6	6.30	5	0.31	5	95.1	5
7	6.07	5	0.27	5	95.5	5
8	6.26	5	0.24	5	96.2	5
9	6.07	5	0.21	5	96.6	5
10	6.02	5	0.22	5	96.3	5
11	5.96	5	0.24	5	96.0	5
12	5.91	5	0.22	5	96.3	5
13	5.93	5	0.27	5	95.5	5
14	6.02	4	0.27	4	95.6	4
15	6.01	5	0.27	5	95.4	5
16	6.15	5	0.26	5	95.7	5
17	5.99	5	0.26	5	95.7	5
18	6.12	5	0.27	5	95.5	5
19	6.05	5	0.30	5	95.0	5
20	6.04	5	0.28	5	95.3	5
21	6.15	5	0.30	5	95.1	5
22	6.12	5	0.32	5	94.8	5
23	6.15	4	0.35	4	94.3	4
AVERAGE FOR THE DAY	6.10	24	0.26	24	95.7	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.14	535	0.80	536	87.0	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                      JULY 16, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0      6.10    5     0.36   5     94.1   5
    1      6.20    5     0.37   5     94.1   5
    2      6.17    5     0.29   5     95.3   5
    3      6.23    5     0.28   5     95.5   5
    4      6.19    5     0.24   5     96.1   5
    5      6.12    5     0.26   4     95.8   4
    6      6.11    5     0.31   5     95.0   5
    7      6.00    5     0.51   5     91.5   5
    8      5.89    5     0.50   5     91.6   5
    9      5.91    4     0.52   4     91.2   4
   10      5.87    4     0.44   4     92.5   4
   11      5.93    6     0.37   6     93.7   6
   12      5.92    4     0.35   4     94.1   4
   13                                               Scrubber down @ 1315
   14
   15
   16      5.85    5     0.39   5     93.4   5
   17      5.86    5     0.40   5     93.2   5      Scrubber up @ 1545
   18      5.82    5     0.37   5     93.7   5
   19      5.78    3     0.35   3     93.9   3
   20      5.83    2     0.42   2     92.9   2
   21      5.78    5     0.40   5     93.1   5
   22      5.76    5     0.53   5     90.8   5
   23      5.86    1     0.66   1     88.7   1

AVERAGE
FOR THE    5.96   21     0.39  21     93.6  20 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.14  534     0.76 535     87.7  22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10	6.05	2	0.17	2	97.2	2
11	5.86	5	0.16	5	97.4	5
12	5.84	5	0.14	5	97.6	5
13	5.82	5	0.14	5	97.5	5
14	5.84	5	0.15	5	97.5	5
15	5.89	4	0.15	4	97.5	4
16	5.98	5	0.14	5	97.7	5
17	5.95	3	0.13	3	97.8	3
18	5.81	3	0.21	3	96.3	3
19	5.80	5	0.18	5	96.8	5
20						
21	5.93	2	0.15	2	97.5	2
22	5.93	5	0.13	5	97.8	5
23	6.02	5	0.13	5	97.8	5

AVERAGE FOR THE DAY	5.90	13	0.15	13	97.4	13 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.14	525	0.72	526	88.3	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 18, 1981

HOUR	F(IN) LB.SO2 /MMBTU	NO. OF PTS	F(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.98	5	0.47	5	92.1	5	
1							
2							Scrubber down @ 0100
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
AVERAGE FOR THE DAY	5.98	1	0.47	1	92.1		1 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.16	502	0.66	503	89.2		20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 19, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							
2							
3							
4							
5							Scrubber up @ 0515
6							Data acquisition system down
7							Data acquisition system down
8							Data acquisition system down
9	6.24	1	0.37	1	94.0	1	
10	5.99	1	0.42	1	93.1	1	
11		0	0.36	1		0	Inlet SO_2 monitor sample probe plugged
12		0	0.37	5		0	Inlet SO_2 monitor sample probe plugged
13		0	0.39	5		0	Inlet SO_2 monitor sample probe plugged
14							Sample probe cleared
15							Span and zero instruments
16							
17							
18	5.50	4	0.40	4	92.8	4	
19	5.59	5	0.37	5	93.3	5	
20	5.58	5	0.38	5	93.2	5	
21	5.71	5	0.35	5	93.9	5	
22							
23	5.69	5	0.31	5	94.5	5	
AVERAGE FOR THE DAY	5.76	7	0.37	10	93.5	5	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.16	485	0.57	489	90.8	19	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JULY 20, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0      5.60    2     0.33    2    94.1    2
     1      5.44    4     0.32    4    94.2    4
     2      5.46    5     0.31    5    94.4    5
     3      5.42    5     0.32    5    94.1    5
     4      5.35    5     0.33    5    93.8    5
     5      5.29    5     0.34    5    93.6    5
     6      5.31    5     0.31    5    94.2    5
     7      5.43    5     0.34    5    93.8    5
     8      5.48    5     0.40    5    92.6    5
     9      5.45    5     0.27    5    95.1    5
    10      5.36    5     0.31    5    94.3    5
    11      5.43    5     0.21    5    96.1    5
    12      5.13    5     0.37    5    92.7    5
    13      5.09    5     0.36    5    92.9    5
    14      5.09    5     0.32    5    93.7    5
    15      5.14    5     0.41    5    92.0    5
    16      5.13    5     0.44    5    91.4    5
    17
    18      5.49    6     0.41    6    92.5    6
    19      5.41    5     0.54    5    89.9    5
    20      5.36    4     0.61    4    88.6    4
    21      5.40    5     0.71    5    86.8    5
    22      5.36    5     0.72    5    86.7    5
    23      5.38    5     0.73    5    86.5    5


AVERAGE
FOR THE     5.35   23     0.41   23    92.3   23 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY     6.13  508     0.56  512    90.8   20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 21, 1981

```
         E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
        /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0      5.38    5    0.76    5    85.9    5
   1      5.36    5    0.79    5    85.2    5
   2      5.29    5    0.75    5    85.9    5
   3    * 5.24    5    0.54    5    89.7    5
   4      5.20    5    0.43    5    91.7    5
   5      5.22    6    0.34    6    93.4    6
   6      5.24    5    0.55    5    89.5    5
   7      5.22    5    0.68    5    87.0    5
   8      5.29    5    0.70    5    86.8    5
   9      5.27    5    0.72    5    86.3    5
  10      5.30    5    0.76    5    85.6    5
  11      5.24    5    0.82    5    84.4    5
  12      5.21    5    0.86    5    83.5    5
  13      5.22    5    0.97    5    81.5    5
  14      5.23    5    1.00    5    80.9    5
  15      5.25    2    0.75    2    85.6    2
  16  SO2 stratification check
  17  Span and zero
  18      5.26    5    0.73    4    86.0    4
  19      5.19    5    0.62    5    88.0    5
  20      5.16    5    0.59    5    88.6    5
  21      5.15    5    0.57    5    88.9    5
  22      5.18    1    0.59    1    88.7    1
  23      5.20    5    0.55    5    89.4    5


AVERAGE
FOR THE   5.24   22    0.69   22    86.9   21 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY
AVERAGE   6.09   530   0.57   534   90.7   21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.14	3	0.56	5	89.9	3	
1	5.13	5	0.35	5	93.3	5	
2	5.05	5	0.31	5	93.9	5	
3	5.00	5	0.34	5	93.2	5	
4	5.05	5	0.39	5	92.3	5	
5	5.04	5	0.40	5	92.1	5	
6	5.02	5	0.43	5	91.4	5	
7	5.20	5	0.76	5	85.4	5	
8	5.23	5	0.81	5	84.5	5	
9	5.24	3	0.85	3	83.7	3	
10	Data acquisition system down						
11	5.63	1	0.88	3	84.2	1	
12	5.40	5	0.89	5	83.5	5	
13	5.21	5	0.88	5	83.0	5	
14	5.92	5	0.90	5	84.7	5	
15	5.43	1	0.85	1	84.3	1	
16	6.13	4	0.71	5	88.5	4	
17	8.24	1	0.63	5	91.5	1	
18		0	0.64	5		0	
19		0	0.61	5		0	Inlet O_2 monitor down
20		0	0.62	5		0	Inlet O_2 monitor down
21	5.44	5	0.59	5	89.1	5	Inlet O_2 monitor down
22	5.31	3	0.44	3	91.7	3	
23	5.34	6	0.41	6	92.4	6	
AVERAGE FOR THE DAY	5.46	20	0.62	23	89.0		17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.07	550	0.57	557	90.6		21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Data acquisition system down					
1	Data acquisition system down					
2	5.35	3	0.30	3	94.5	3
3	5.37	5	0.29	5	94.6	5
4	5.45	5	0.30	5	94.5	5
5	5.45	5	0.33	5	93.9	5
6	5.56	5	0.33	5	94.2	5
7	5.66	5	0.43	5	92.4	5
8	5.45	5	0.52	5	90.4	5
9	5.54	5	0.60	5	89.2	5
10	5.52	5	0.60	5	89.2	5
11	5.52	4	0.58	4	89.6	4
12	5.56	5	0.68	5	87.7	5
13	5.73	5	0.71	5	87.6	5
14	5.69	5	0.70	5	87.7	5
15	5.70	1	0.69	1	87.8	1
16	5.83	6	0.76	6	86.9	6
17	5.93	5	0.77	5	87.0	5
18	5.89	5	0.74	5	87.4	5
19	5.86	5	0.77	5	86.9	5
20	5.88	5	0.74	5	87.3	5
21	5.89	5	0.88	5	85.1	5
22	6.00	5	1.18	5	80.4	5
23	6.04	5	0.98	5	83.8	5
AVERAGE FOR THE DAY	5.68	22	0.63	22	89.1	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.05	572	0.57	579	90.6	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.89	5	0.73	5	87.6	5
1	5.94	4	0.73	4	87.6	4
2	5.97	5	0.75	5	87.4	5
3	5.95	4	0.77	4	87.1	4
4	5.92	5	0.79	5	86.7	5
5	6.05	5	0.78	5	87.1	5
6	5.91	5	0.63	5	89.3	5
7	5.95	5	0.80	5	86.5	5
8	5.95	5	1.07	5	82.0	5
9	6.10	5	1.17	5	80.8	5
10	6.08	5	1.15	5	81.1	5
11	6.03	5	1.12	5	81.4	5
12	6.00	5	1.16	5	80.7	5
13	5.98	5	1.13	5	81.0	5
14	5.97	3	1.21	3	79.6	3
15	5.89	2	1.29	2	78.1	2
16	Daily span and zero					
17	O_2 monitor calibration check					
18						
19	6.07	4	1.27	4	79.1	4
20	6.05	4	1.22	4	79.9	4
21	6.04	1	1.22	1	79.9	1
22	Data acquisition system down					
23	Data acquisition system down					

AVERAGE FOR THE DAY	5.99	19	1.00	19	83.5	18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.05	582	0.57	589	90.5	23 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JULY 25, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU   PTS  /MMBTU  PTS    %     PTS

       0   Data acquisition system down
       1
       2
       3
       4
       5
       6
       7
       8
       9
      10
      11
      12      6.61     2    1.04    2    84.2    2
      13      6.68     3    1.04    3    84.5    3
      14               0            0            0
      15      6.00     3    0.86    3    85.6    3
      16      6.03     3    0.95    3    84.3    3
      17      5.98     5    0.94    5    84.3    5
      18   Data acquisition system down
      19   Data acquisition system down
      20   Data acquisition system down
      21      6.10     1    1.00    1    83.7    1
      22      6.01     2    0.67    2    88.8    2
      23      6.01     5    0.63    5    89.5    5

  AVERAGE
  FOR THE     6.18     8    0.89    8    85.9   7 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY
  AVERAGE     6.06   567    0.55  574    90.9   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 26, 1981

```
          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS     %     PTS

  0       6.01     5    0.47    5    92.1    5
  1       6.17     5    0.45    5    92.7    5
  2       6.11     5    0.43    5    93.0    5
  3       6.12     5    0.43    5    93.0    5
  4       6.14     5    0.45    5    92.7    5
  5       6.08     5    0.45    5    92.6    5
  6       6.07     5    0.45    5    92.7    5
  7       6.04     5    0.42    5    93.1    5
  8       6.02     5    0.57    5    90.5    5
  9       6.06     5    0.80    5    86.8    5
 10       6.11     4    0.99    4    83.8    4
 11       6.12     5    0.98    5    84.1    5
 12       6.12     5    0.94    5    84.6    5
 13       6.12     3    0.93    3    84.7    3
 14   Daily span and zero
 15       6.02     4    1.08    4    82.1    4
 16       6.06     5    1.07    5    82.3    5
 17       6.04     5    1.02    5    83.1    5
 18       6.07     5    1.04    5    82.9    5
 19       6.06     5    1.05    5    82.7    5
 20       6.11     5    1.03    5    83.1    5
 21       6.14     5    1.03    5    83.2    5
 22       6.10     4    1.00    4    83.5    4
 23       6.06     5    0.93    5    84.6    5

AVERAGE
FOR THE   6.09    23    0.78   23    87.1   23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   6.07   570    0.56  577    90.8   22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JULY 27, 1981

            E(IN)   NO.  E(OUT)   NO.  REDUC.  NO.
HOUR       LB.SO2   OF   LB.SO2   OF    EFF.   OF
           /MMBTU   PTS  /MMBTU   PTS    %     PTS

  0         6.28     5     0.67    5    89.5    5
  1         6.12     5     0.56    5    90.9    5
  2         6.06     5     0.55    5    91.0    5
  3         6.07     5     0.57    5    90.6    5
  4         6.10     5     0.52    5    91.4    5
  5         6.13     5     0.52    5    91.6    5
  6         6.20     5     0.62    5    90.0    5
  7         6.17     5     0.80    5    87.1    5
  8         6.08     3     0.89    3    85.4    3
  9    Data acquisition system down
 10    Data acquisition system down
 11         6.07     4     1.10    4    81.9    4
 12         6.06     5     1.13    5    81.3    5
 13         6.00     1     1.20    1    80.1    1
 14    Data acquisition system down
 15                 |
 16                 |
 17                 |
 18                 |
 19                 |
 20                 |
 21                 |
 22                 |
 23                 ↓

 AVERAGE
 FOR THE    6.11   12    0.76   12    88.2  11 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.09   560   0.57   567   90.7  21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                          JULY 28, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1               0            0            0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

  AVERAGE
  FOR THE            0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.10   536   0.58   543   90.5   20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Data acquisition system down

```
                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     JULY 29, 1981

           E(IN)  NO. E(OUT) NO. REDUC. NO.
   HOUR    LB.SO2 OF  LB.SO2 OF   EFF.  OF
           /MMBTU PTS /MMBTU PTS   %    PTS

     0  Data acquisition system down
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18  Daily span and zero
    19     5.92    4   0.91   4    84.6   4
    20     5.91    5   0.91   5    84.5   5
    21     5.94    1   0.90   1    84.8   1
    22     5.96    5   0.88   5    85.3   5
    23


 AVERAGE
 FOR THE   5.93    4   0.90   4    84.8   3 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY   6.11  519   0.60  525   90.2   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

JULY 30, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1	6.01	4	0.84	4	86.1	4	
2	6.03	1	0.88	1	85.5	1	
3	6.06	5	0.47	5	92.3	5	
4	6.02	4	0.50	4	91.7	4	
5	**Data acquisition system down**						
6							
7							
8							
9							
10	5.97	5	1.24	5	79.3	5	
11	5.82	6	1.30	6	77.7	6	
12	6.05	5	1.28	5	78.9	5	
13	5.82	5	1.36	5	76.6	5	
14	5.71	5	1.31	5	77.1	5	
15							
16	5.89	3	1.08	3	81.7	3	
17	5.92	5	0.97	5	83.6	5	
18	5.99	5	0.91	5	84.8	5	
19	5.88	5	0.87	5	85.2	5	
20	5.90	5	0.87	5	85.3	5	
21	6.03	5	0.82	5	86.4	5	
22	6.02	5	0.93	5	84.5	5	
23	6.03	5	0.76	5	87.4	5	
AVERAGE FOR THE DAY	5.95	17	0.96	17	83.7	16 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.10	513	0.63	519	89.7	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                       JULY 31, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC. NO.
  HOUR      LB.SO2   OF   LB.SO2  OF    EFF.  OF
            /MMBTU   PTS  /MMBTU  PTS    %    PTS

    0        6.00    4    0.63    4    89.5    4
    1        6.02    5    0.66    5    89.1    5
    2        6.07    5    0.64    5    89.5    5
    3        6.04    5    0.61    5    89.8    5
    4        5.95    5    0.67    5    88.8    5
    5        5.99    5    0.73    5    87.9    5
    6
    7
    8        6.05    2    0.74    2    87.7    2
    9        6.05    5    0.68    5    88.8    5
   10        5.98    5    0.69    5    88.4    5
   11        5.95    5    0.68    5    88.5    5
   12        5.95    5    0.70    5    88.2    5
   13        5.84    5    0.80    5    86.3    5
   14        5.82    5    0.95    5    83.8    5
   15        5.66    5    0.91    5    83.9    5
   16        5.69    5    0.84    5    85.3    5
   17        5.45    2    0.75    2    86.3    2
   18        5.45    5    0.75    5    86.3    5
   19        5.43    5    0.65    5    88.1    5
   20        5.40    5    0.60    5    89.0    5
   21        5.38    5    0.59    4    89.0    4
   22        5.35    4    0.63    4    88.2    4
   23        5.32    5    0.26    5    95.0    5

 AVERAGE
 FOR THE     5.77   22    0.69   22    88.1   22 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     6.08   516   0.64   522   89.4   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 1, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.28	5	0.24	5	95.4	5
1	5.26	4	0.30	4	94.4	4
2	5.15	5	0.28	5	94.6	5
3	5.12	5	0.30	5	94.2	5
4	5.16	5	0.30	5	94.2	5
5	5.09	5	0.30	5	94.1	5
6	5.18	5	0.31	5	94.0	5
7	5.18	5	0.29	5	94.3	5
8	5.18	5	0.26	5	94.9	5
9	5.11	5	0.30	5	94.0	5
10	5.22	5	0.36	5	93.1	5
11	5.17	5	0.37	5	92.8	5
12	5.16	6	0.38	6	92.6	6
13	5.10	6	0.42	6	91.8	6
14	5.08	5	0.41	5	92.0	5
15	5.06	5	0.38	5	92.5	5
16	5.08	5	0.41	5	91.9	5
17	5.08	5	0.44	5	91.4	5
18	5.13	5	0.49	5	90.4	5
19	5.24	5	0.59	5	88.8	5
20	5.29	5	0.63	5	88.1	5
21	5.45	4	0.69	4	87.3	4
22						
23	5.42	4	0.53	4	90.3	4
AVERAGE FOR THE DAY	5.18	23	0.39	23	92.5	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.03	517	0.62	523	89.7	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 2, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.45	3	0.54	3	90.1	3	
1	5.50	5	0.51	5	90.7	5	
2	5.49	5	0.49	5	91.0	5	
3	5.56	4	0.51	4	90.9	4	
4	5.55	5	0.49	5	91.1	5	
5	5.55	5	0.49	5	91.1	5	
6	5.60	5	0.54	5	90.4	5	
7	5.60	5	0.56	5	89.9	5	
8	5.57	5	0.72	5	87.1	5	
9	5.36	5	0.81	5	84.9	5	
10	5.32	5	0.85	5	84.0	5	
11	5.37	3	0.83	3	84.6	3	
12	5.50	5	0.80	5	85.4	5	
13	5.35	2	0.79	2	85.2	2	
14	5.37	5	0.82	5	84.7	5	
15	5.36	6	0.77	6	85.7	6	
16	5.38	6	0.77	6	85.6	6	
17	5.37	5	0.79	5	85.3	5	
18	5.35	4	0.85	4	84.2	4	
19	5.46	5	0.84	5	84.7	5	
20	5.52	5	0.81	5	85.4	5	
21	5.48	5	0.69	5	87.3	5	
22	5.50	5	0.55	5	90.0	5	
23	5.47	5	0.55	5	90.0	5	
AVERAGE FOR THE DAY	5.46	24	0.68	24	87.5	24	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.99	526	0.63	532	89.6	19	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.56	4	0.53	4	90.5	4
1	5.51	5	0.49	5	91.0	5
2	5.50	5	0.49	5	91.1	5
3	5.49	5	0.47	5	91.5	5
4	5.48	5	0.46	5	91.5	5
5	5.51	5	0.55	5	90.1	5
6	5.51	5	0.53	5	90.1	5
7	5.53	5	0.53	5	90.4	5
8	5.56	5	0.58	5	90.4	5
9	5.47	5	0.58	5	89.6	5
10	5.45	5	0.54	5	90.1	5
11	5.47	5	0.51	5	90.6	5
12	5.54	5	0.57	5	89.6	5
13	5.55	5	0.79	5	85.7	5
14	5.56	5	0.87	5	84.2	5
15	5.49	5	0.98	5	82.3	5
16	5.61	5	1.11	5	79.8	5
17	5.60	5	1.10	5	80.5	5
18	5.69	3	1.09	5	80.5	5
19	5.67	5	1.03	3	82.0	3
20	5.64	5	1.11	5	80.4	5
21	5.66	5	1.05	5	81.5	5
22	5.65	5	1.00	5	82.3	5
23	5.64	5	1.02	5	81.9	5
			1.11	5	80.4	5
AVERAGE FOR THE DAY	5.56	24	0.77	24	86.2	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.97	539	0.63	545	89.4	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     AUGUST 4, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0      5.65    5    1.13    5    80.1    5
     1      5.68    5    1.21    5    78.6    5
     2      5.64    5    1.24    5    79.0    5
     3      5.62    5    1.29    5    77.1    5
     4      5.64    5    1.23    5    78.2    5
     5      5.70    5    1.10    5    80.7    5
     6      5.64    5    1.01    5    82.1    5
     7      5.61    1    1.17    1    79.1    1
     8      5.63    5    1.21    5    78.4    5
     9      5.21    5    1.11    5    78.8    5
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23      5.65    3    2.11    3    62.7    3

  AVERAGE
  FOR THE   5.61   11    1.26   11    77.5  10 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   5.95  526    0.66  532    88.9  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

Scrubber down @ 0925

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							Scrubber up @ 0025
1	6.15	5	1.25	5	79.7	5	
2	6.27	2	1.24	2	80.3	2	
3	6.28	5	1.25	5	80.0	5	
4	6.27	5	1.15	5	81.6	5	
5	6.10	5	0.88	5	85.5	5	
6	6.06	5	1.06	5	82.5	5	
7	5.97	5	1.05	5	82.4	5	
8	5.89	5	1.15	5	80.4	5	
9	5.92	5	1.19	5	79.9	5	
10	5.92	3	1.17	3	80.2	3	
11	5.83	5	1.48	5	74.6	5	
12	5.88	5	1.55	5	73.6	5	
13	5.85	4	1.60	4	72.6	4	
14	5.87	3	2.12	3	64.0	3	
15	Daily span and zero						
16	SO_2 monitor calibration check						
17							
18	5.82	2	2.03	2	65.2	2	
19	5.77	5	1.83	5	68.3	5	
20	5.81	5	1.64	5	71.9	5	
21	5.86	5	1.94	5	67.0	5	
22	5.91	5	2.05	5	65.3	5	
23	5.90	3	1.69	3	71.3	3	
AVERAGE FOR THE DAY	5.97	20	1.47	20	75.3	20 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.94	529	0.69	535	88.3	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.87	5	1.50	5	74.4	5
1	5.77	5	1.54	5	73.3	5
2	5.73	5	1.43	5	75.0	5
3	5.73	5	1.44	5	74.9	5
4	5.79	5	1.41	5	75.6	5
5	5.80	4	1.39	4	75.9	4
6	5.78	5	1.37	5	76.4	5
7	5.77	5	1.33	5	77.0	5
8	5.79	5	1.34	6	77.1	5
9	5.74	5	1.35	5	76.4	5
10	5.70	5	1.33	5	76.6	5
11	5.61	5	1.28	5	77.2	5
12	5.66	5	1.25	5	77.9	5
13	5.65	5	1.21	5	78.6	5
14	5.60	5	1.14	5	79.7	5
15	5.59	5	1.17	5	79.1	5
16	5.66	2	0.81	2	85.6	2
17	5.64	5	1.15	5	79.6	5
18	5.66	5	1.14	5	79.9	5
19	5.64	5	1.26	5	77.6	5
20	5.59	5	1.21	5	78.3	5
21	5.59	5	1.19	5	78.7	5
22	5.55	5	1.10	5	80.2	5
23	5.56	5	1.03	5	81.5	5
AVERAGE FOR THE DAY	5.69	24	1.27	24	77.8	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.91	530	0.72	536	87.8	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-2

                        AUGUST 7, 1981

               E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
              /MMBTU   PTS  /MMBTU  PTS    %     PTS

       0       5.63     5    1.06    5    81.3    5
       1       5.51     5    1.20    5    78.2    5
       2       5.57     5    1.16    5    79.2    5
       3       5.48     5    0.93    5    83.0    5
       4       5.52     5    0.82    5    85.2    5
       5       5.54     5    0.84    5    84.9    5
       6       5.63     5    1.07    5    81.0    5
       7       5.66     5    1.13    5    80.0    5
       8       5.71     5    1.23    5    78.5    5
       9       5.69     5    1.11    5    80.5    5
      10       5.65     5    1.19    5    78.9    5
      11       5.61     5    1.18    5    78.9    5
      12       5.53     5    1.09    5    80.2    5
      13       5.58     3    1.04    3    81.4    3
      14       5.58     6    0.95    6    83.0    6
      15       5.59     5    0.94    5    83.1    5
      16       5.65     5    0.99    5    82.5    5
      17       5.71     5    1.00    5    82.4    5
      18       5.79     4    1.04    4    82.[illegible]    4
      19       5.76     5    1.00    5    82.7    5
      20       5.73     5    1.03    5    81.9    5
      21       5.65     5    1.01    5    82.1    5
      22
      23       5.67     6    1.32    6    76.7    6


   AVERAGE
   FOR THE     5.63    23    1.06   23    81.2  23 HOURS OF MONITORING DATA
     DAY


   ROLLING
    30 DAY     5.87   531    0.72  537    87.7  20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 8, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.57	4	0.71	4	87.2	4
1	5.53	5	0.67	5	88.0	5
2	5.61	5	0.72	5	87.2	5
3	5.62	5	0.72	5	87.2	5
4	5.62	5	0.67	5	88.1	5
5	5.55	5	0.71	5	87.3	5
6	5.61	5	0.73	5	87.1	5
7	5.59	5	0.74	5	86.9	5
8	5.65	5	0.76	5	86.6	5
9	5.63	5	0.82	5	85.5	5
10	5.60	6	0.75	6	86.6	6
11	5.59	5	0.97	5	82.7	5
12	5.62	5	1.04	5	81.5	5
13	5.66	5	1.08	5	80.9	5
14	5.69	5	1.12	5	80.3	5
15	5.66	5	1.06	5	81.3	5
16	5.62	4	1.06	4	81.1	4
17	**Daily span and zero**					
18	5.75	4	1.70	4	70.5	4
19	5.58	5	1.70	5	69.6	5
20	5.63	1	2.00	1	64.6	1
21	5.60	5	1.74	5	69.1	5
22	5.59	5	2.12	5	62.2	5
23						
AVERAGE FOR THE DAY	5.62	22	1.07	22	81.7	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.84	532	0.73	538	87.5	20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                        AUGUST 9, 1981

              E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
             /MMBTU  PTS  /MMBTU  PTS     %     PTS

       0
       1
       2
       3
       4
       5
       6
       7
       8
       9      5.74    6    1.10    6     80.8    6
      10      5.53    3    0.80    3     85.7    3
      11      5.52    5    1.02    5     81.6    5
      12      5.60    5    1.04    5     81.3    5
      13      5.57    4    0.99    4     82.2    4
      14      5.56    2    1.10    2     80.2    2
      15      5.60    5    1.70    5     69.7    5
      16      5.65    5    2.00    5     64.6    5
      17      5.60    3    1.98    3     64.6    3
      18      5.66    3    1.82    3     67.8    3
      19      5.66    5    1.75    5     69.1    5
      20      5.70    5    1.94    5     65.9    5
      21      5.76    5    2.01    5     65.1    5
      22      5.78    5    2.00    5     65.4    5
      23      5.78    5    1.60    5     72.4    5

   AVERAGE
   FOR THE    5.65   15    1.52   15     73.1  15 HOURS OF MONITORING DATA
     DAY

   ROLLING
    30 DAY    5.81  526    0.76  532    86.9  19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
   AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-2

                       AUGUST 10, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0      5.83     4    1.11    4    81.0    4
     1      5.78     3    0.88    3    84.7    3
     2      5.75     5    0.86    5    85.0    5
     3      5.86     5    0.93    5    84.1    5
     4      5.83     5    1.03    5    82.4    5
     5      5.80     4    1.07    4    81.6    4
     6      5.88     5    1.19    5    79.8    5
     7      5.82     5    1.46    5    75.0    5
     8      5.95     5    2.00    5    66.4    5
     9      5.77     5    1.92    5    66.7    5
    10      5.78     5    1.87    5    67.6    5
    11      5.76     5    1.62    5    71.9    5
    12      5.77     5    1.48    5    74.4    5
    13      5.82     5    1.42    5    75.6    5
    14      5.86     5    1.47    5    74.9    5
    15      5.89     5    1.38    5    76.7    5
    16      5.90     6    1.42    6    75.9    6
    17      5.86     5    1.61    5    72.5    5
    18      5.90     1    1.72    1    70.9    1
    19      5.94     4    2.09    4    64.8    4
    20      5.92     5    2.14    5    63.9    5
    21      5.96     5    2.16    5    63.8    5
    22      5.97     5    1.95    5    67.3    5
    23      5.94     5    1.33    5    77.6    5

  AVERAGE
  FOR THE   5.86    24    1.50   24    74.5   23 HOURS OF MONITORING DATA
    DAY

  ROLLING
  30 DAY    5.79   528    0.79  534    86.3   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.96	5	0.72	5	87.9	5	
1	5.91	5	0.70	5	88.2	5	
2	5.94	5	1.03	5	82.7	5	
3	6.01	5	0.75	5	87.5	5	
4	6.04	5	0.66	5	89.1	5	
5	6.01	5	0.60	5	90.0	5	
6	6.03	5	0.62	5	89.7	5	
7	6.18	2	1.05	2	83.0	2	
8	6.17	5	1.24	5	79.9	5	
9	6.17	5	1.21	5	80.3	5	
10	6.13	5	1.26	5	79.5	5	
11	**Daily span and zero**						
12	6.17	5	1.28	5	79.3	5	
13	6.24	5	1.29	5	79.3	5	
14	6.22	5	1.31	5	79.0	5	
15	6.21	5	1.28	5	79.4	5	
16	6.20	6	1.11	6	82.1	6	
17	6.18	4	1.29	4	79.1	4	
18	6.17	6	1.32	6	78.6	6	
19	6.25	2	0.86	2	86.0	2	
20	6.11	5	1.38	5	77.4	5	
21	6.13	5	1.37	5	77.6	5	
22	6.12	2	1.34	5	78.0	2	
23							
AVERAGE FOR THE DAY	6.12	22	1.08	22	82.4		22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.78	530	0.81	536	86.0		19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 12, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	**Data acquisition system down**						
1							
2							
3							
4		0	0.67	2		0	**Inlet SO_2 monitor down**
5		0	0.69	5		0	
6		0	0.67	5		0	
7		0	0.64	5		0	
8		0	0.71	5		0	
9		0	0.57	1		0	
10							
11		0	1.11	3		0	
12		0	1.12	2		0	
13							
14							
15		0	1.09	1		0	
16							
17							
18							
19							
20							
21							
22							
23							
AVERAGE FOR THE DAY		0	0.81	9		0 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.75	508	0.82	525	85.8	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                     AUGUST 13. 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0   Data acquisition system down
     1
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12     5.79     5    0.92    5    84.1    5
    13     5.83     5    0.87    5    85.2    5
    14     5.78     2    0.86    2    85.2    2
    15     5.75     5    0.81    5    85.9    5
    16     5.78     5    0.77    5    86.6    5
    17     5.77     5    0.79    5    86.4    5
    18     5.77     5    0.80    5    86.1    5
    19     5.76     5    0.84    5    85.5    5
    20     5.78     5    0.82    5    85.7    5
    21     5.76     5    0.77    5    86.6    5
    22     5.74     5    0.62    5    89.2    5
    23     5.73     5    0.46    5    92.0    5

 AVERAGE
 FOR THE   5.77    12    0.78   12    86.5   12 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.73   502    0.82  517    85.6   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                  ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                      AUGUST 14, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0      5.63    4    0.22    4    96.1    4
     1      5.70    5    0.28    5    95.0    5
     2      5.75    5    0.27    5    95.2    5
     3      5.76    5    0.28    5    95.2    5
     4      5.72    5    0.28    5    95.1    5
     5      5.70    5    0.28    5    95.1    5
     6      5.68    5    0.24    5    95.7    5
     7      5.60    5    0.25    5    95.6    5
     8      5.61    5    0.25    5    95.6    5
     9      5.78    5    0.26    5    95.4    5
    10      5.57    5    0.29    5    94.8    5
    11      5.74    5    0.45    5    92.1    5
    12      5.68    5    0.46    5    91.8    5
    13      5.71    5    0.47    5    91.8    5
    14      5.78    5    0.48    5    91.7    5
    15      5.80    5    0.48    5    91.7    5
    16
    17      5.93    4    0.44    2    92.6    2
    18   Daily span and zero
    19      6.09    4    0.43    4    92.9    4
    20      6.16    3    0.41    3    93.4    3
    21      6.12    5    0.49    5    91.9    5
    22      6.16    5    0.31    5    94.9    5
    23      5.98    4    0.33    5    95.7    4     Scrubber down @ 2340

  AVERAGE
  FOR THE   5.80   22    0.35   22    94.1   22 HOURS OF MONITORING DATA
    DAY

  ROLLING
  30 DAY    5.72  500    0.83  515    85.5   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                        AUGUST 15, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

     0
     1             0            0            0        Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   5.71   479   0.85   494   85.1   16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                      AUGUST 16, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0
     1               0            0            0        Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


  AVERAGE
  FOR THE            0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   5.70    466  0.87    481  84.8   16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	**Scrubber down**						
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11	6.34	1	0.13	1	97.9	1	**Scrubber up @ 1120**
12	6.02	3	0.09	2	98.5	2	
13	6.03	3	0.08	3	98.6	3	
14	5.98	1	0.19	1	96.8	1	
15	**Data acquisition system down**						
16	5.88	3	0.28	1	95.3	1	
17	**Data acquisition system down**						
18	5.87	6	0.25	6	95.8	6	
19	5.84	5	0.26	5	95.6	5	
20	5.82	5	0.38	5	93.5	5	
21	**Daily span and zero**						
22	5.84	4	0.27	4	95.4	4	
23	5.85	5	0.30	5	95.0	5	
AVERAGE FOR THE DAY	5.95	10	0.22	10	96.1	7 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.71	475	0.86	490	85.0	16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 18, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.83	5	0.27	5	95.4	5
1	5.76	5	0.29	5	95.0	5
2	5.65	5	0.29	5	94.9	5
3	5.67	5	0.33	5	94.3	5
4	5.69	5	0.33	5	94.2	5
5	5.65	5	0.42	5	92.6	5
6	5.76	5	0.74	5	87.2	5
7	5.79	5	0.59	5	89.9	5
8	5.75	5	0.30	5	94.7	5
9	5.79	5	0.20	5	96.5	5
10	Daily span and zero					
11	5.22	3	1.28	5	75.5	3
12		0	0.98	5		0
13	4.47	1	0.75	5	79.1	1
14	Outlet SO_2 monitor down					
15	5.73	3	0.29	3	95.0	3
16	5.73	5	0.16	5	97.2	5
17	5.75	5	0.14	5	97.6	5
18	5.81	5	0.15	5	97.4	5
19	5.82	4	0.26	4	95.5	4
20	5.73	3	0.41	3	92.8	3
21	5.76	5	0.44	5	92.4	5
22	5.77	5	0.35	5	94.0	5
23	5.77	5	0.31	5	94.6	5
AVERAGE FOR THE DAY	5.66	21	0.42	22	93.3	20 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.70	489	0.85	502	85.2	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     AUGUST 19, 1981

            E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2 OF   LB.SO2  OF    EFF.   OF
            /MMBTU PTS  /MMBTU  PTS    %     PTS

     0       5.69   5    0.22    5    96.1    5
     1       5.67   5    0.32    5    94.3    5
     2       5.69   5    0.39    5    93.2    5
     3       5.65   5    0.42    5    92.6    5
     4       5.71   5    0.98    5    82.8    5
     5       5.67   5    0.47    5    91.7    5
     6       5.65   5    0.22    5    96.0    5
     7       5.72   5    0.21    5    96.3    5
     8       5.81   5    0.22    5    96.2    5
     9       5.80   5    0.18    5    96.9    5
    10       5.77   5    0.14    5    97.6    5
    11       5.77   5    0.13    5    97.8    5
    12       5.78   5    0.14    5    97.5    5
    13       5.71   4    0.13    4    97.6    4
    14       5.48   1    0.13    1    97.6    1
    15   Zero drift test on O2 monitors
    16   Zero drift test on O2 monitors
    17       5.68   1    0.09    1    98.4    1
    18       5.83   5    0.19    5    96.8    5
    19       5.83   5    0.10    5    98.4    5
    20       5.76   5    0.10    5    98.3    5
    21
    22       5.79   5    0.10    5    98.2    5
    23       5.85   5    0.11    5    98.2    5


  AVERAGE
  FOR THE    5.73  21    0.24   21    95.6  19 HOURS OF MONITORING DATA
    DAY


  ROLLING
   30 DAY    5.72  487   0.84  500    85.3  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     AUGUST 20, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0      5.86     5    0.12    5    97.9    5
     1      5.79     5    0.11    5    98.1    5
     2      5.69     5    0.12    5    98.0    5
     3      5.75     5    0.11    5    98.0    5
     4      5.82     5    0.11    5    98.1    5
     5      5.79     5    0.10    5    98.3    5
     6      5.83     5    0.10    5    98.3    5
     7      5.80     5    0.10    5    98.3    5
     8      5.79     5    0.10    5    98.3    5
     9      5.81     5    0.08    5    98.6    5
    10      5.78     5    0.07    5    98.8    5
    11      5.75     5    0.06    5    99.0    5
    12      5.72     5    0.07    5    98.9    5
    13      5.77     4    0.09    4    98.4    4
    14      5.71     5    0.10    5    98.3    5
    15      5.72     2    0.11    2    98.1    2
    16      5.71     5    0.09    5    98.4    5
    17      5.75     3    0.08    3    98.5    3
    18      5.68     5    0.08    5    98.5    5
    19      5.76     5    0.09    5    98.5    5
    20      5.78     5    0.09    5    98.5    5
    21      5.78     5    0.11    5    98.2    5
    22      5.75     5    0.11    5    98.0    5
    23      5.81     5    0.11    5    98.2    5

 AVERAGE
 FOR THE    5.77    24    0.10   24    98.3   24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    5.75   489    0.81  502    85.9   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     AUGUST 21, 1981

          E(IN)   NO.  E(OUT)   NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2   OF    EFF.   OF
         /MMBTU  PTS   /MMBTU  PTS     %     PTS

   0      5.79    5     0.10    5     98.3    5
   1      5.80    5     0.10    5     98.2    5
   2      5.77    5     0.12    5     98.0    5
   3      5.77    5     0.13    5     97.8    5
   4      5.72    5     0.12    5     97.9    5
   5      5.75    5     0.12    5     98.0    5
   6      5.78    5     0.12    5     97.8    5
   7      5.75    5     0.10    5     98.2    5
   8      5.76    5     0.12    5     97.9    5
   9      5.78    5     0.11    5     98.1    5
  10      5.73    5     0.10    5     98.2    5
  11      5.68    5     0.10    5     98.3    5
  12      5.71    5     0.09    5     98.5    5
  13      5.74    5     0.11    5     98.1    5
  14      5.76    5     0.11    5     98.0    5
  15      5.78    3     0.11    3     98.1    3
  16      5.70    1     0.31    1     94.6    1
  17
  18      5.79    1     0.28    1     95.1    1
  19      5.81    5     0.24    6     96.2    5
  20      5.89    5     0.12    5     97.9    5
  21      5.83    5     0.14    5     97.6    5
  22      5.83    5     0.13    5     97.7    5
  23      5.85    5     0.14    5     97.6    5

AVERAGE
FOR THE   5.77   23     0.14   23     97.9   21 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   5.76  492     0.79  502     86.3   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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Zero drift test
Daily span and zero

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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     AUGUST 22, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS    %     PTS

   0        5.86    5    0.15    5    97.4    5
   1        5.87    5    0.15    5    97.5    5
   2        5.88    5    0.16    5    97.3    5
   3        5.80    5    0.14    5    97.5    5
   4        5.86    5    0.14    5    97.6    5
   5        5.90    5    0.14    5    97.6    5
   6        5.93    5    0.15    5    97.4    5
   7        5.97    5    0.14    5    97.6    5
   8        5.89    5    0.13    5    97.8    5
   9        5.89    5    0.13    5    97.8    5
  10        5.82    5    0.12    5    97.9    5
  11        5.84    5    0.14    5    97.6    5
  12        5.80    5    0.14    5    97.5    5
  13        5.78    5    0.14    5    97.6    5
  14        5.85    5    0.15    5    97.5    5
  15        5.83    2    0.17    1    97.1    1
  16    SO2 stratification check
  17        5.86    3    0.18    3    97.0    3
  18        5.85    5    0.11    5    98.1    5
  19        5.87    4            0            0         Outlet SO2 monitor down
  20        5.89    4    0.10    4    98.4    4
  21        5.87    5    0.14    5    97.6    5
  22        5.84    3    0.16    3    97.3    3
  23        5.88    5    0.18    5    97.0    5


AVERAGE
FOR THE     5.86   23    0.14   22    97.6   21 HOURS OF MONITORING DATA
  DAY


ROLLING
 30 DAY     5.77  493    0.77  502    86.7   18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.88	5	0.17	5	97.1	5	
1	5.84	5	0.18	5	96.9	5	
2	5.81	5	0.18	5	96.9	5	
3	5.89	5	0.20	5	96.6	5	
4	5.89	5	0.20	5	96.5	5	
5	5.82	5	0.21	5	96.5	5	
6	5.74	5	0.21	5	96.4	5	
7	5.80	3	0.20	3	96.5	3	
8	5.74	5	0.19	5	96.7	5	
9	5.75	5	0.20	5	96.5	5	
10	5.77	5	0.20	5	96.6	5	
11	5.71	5	0.20	5	96.4	5	
12	5.70	5	0.21	5	96.3	5	
13	5.70	5	0.21	5	96.4	5	
14	5.73	5	0.20	5	96.5	5	
15	**SO_2 stratification check**						
16	**SO_2 stratification check**						
17	5.83	3	0.26	3	95.6	3	
18	5.82	4	0.27	4	95.4	4	
19	5.84	5	0.18	5	97.0	5	
20	5.82	5	0.11	5	98.1	5	
21	5.83	5	0.03	5	99.4	5	
22	5.81	5	0.00	5	99.9	5	
23	5.83	5	0.36	5	93.9	5	
AVERAGE FOR THE DAY	5.80	22	0.19	22	96.7	22	HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.76	496	0.73	505	87.3	18	DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 24, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.86	4	0.21	4	96.5	4
1	5.72	5	0.19	5	96.7	5
2	5.77	5	0.18	5	96.9	5
3	5.82	6	0.20	6	96.5	6
4	5.78	5	0.20	5	96.6	5
5	5.75	5	0.20	5	96.5	5
6	5.67	5	0.18	5	96.8	5
7	5.68	5	0.20	5	96.5	5
8	5.66	5	0.18	5	96.9	5
9	5.61	5	0.17	5	97.0	5
10	5.70	5	0.18	5	96.8	5
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	5.73	11	0.19	11	96.7	11 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.75	499	0.72	528	87.5	18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Scrubber down @ 1055

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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                    AUGUST 25, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1               0            0            0      Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23

  AVERAGE
  FOR THE            0            0            0 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   5.74   476   0.72   485   87.5   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 26, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16	5.77	4	0.20	4	96.5	4
17	5.85	1	0.23	1	96.0	1
18	5.81	5	0.27	5	95.3	5
19	Daily span and zero					
20	5.88	4	0.27	4	95.5	4
21	5.78	5	0.27	5	95.4	5
22	5.68	5	0.26	5	95.4	5
23	5.84	4	0.31	4	94.6	4
AVERAGE FOR THE DAY	5.80	7	0.26	7	95.4	6 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.73	471	0.71	480	87.6	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Scrubber up @ 0945
Data acquisition system malfunction

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 27, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.69	5	0.25	5	95.6	5
1	5.81	5	0.27	5	95.4	5
2	5.95	5	0.31	5	94.7	5
3	6.09	5	0.35	5	94.3	5
4	6.12	5	0.31	5	95.0	5
5	6.02	5	0.29	5	95.2	5
6	6.03	5	0.33	5	94.6	5
7	6.14	5	0.49	5	92.0	5
8	5.89	5	0.55	5	90.7	5
9	5.89	5	0.68	5	88.5	5
10	5.84	5	0.64	5	89.1	5
11	Data acquisition system malfunction					
12	5.89	1	0.35	1	94.1	1
13	Daily span and zero		0.41	1		0
14	6.05	4	0.37	3	93.9	3
15	5.92	5	0.38	5	93.5	5
16	5.92	5	0.38	5	93.6	5
17	6.02	5	0.37	5	93.8	5
18	6.01	4	0.33	4	94.5	4
19						
20	5.80	1	0.45	1	92.3	1
21	Data acquisition system malfunction					
22	Data acquisition system malfunction					
23	5.92	1	0.43	1	92.7	1
AVERAGE FOR THE DAY	5.95	19	0.40	20	93.4	16 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.74	490	0.70	500	87.9	17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

AUGUST 28, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	5.98	5	0.43	5	92.8	5	
1	5.87	5	0.42	5	92.9	5	
2	5.90	5	0.46	5	92.2	5	
3	5.87	5	0.45	5	92.4	5	
4	5.87	5	0.45	5	92.3	5	
5	5.86	5	0.43	5	92.7	5	
6	5.90	5	0.43	5	92.8	5	
7	5.97	5	0.49	5	91.8	5	
8	5.92	5	0.67	5	88.7	5	
9	5.96	5	0.61	5	89.8	5	
10	5.96	5	0.56	5	90.7	5	
11	5.95	5	0.66	5	88.8	5	
12	6.04	5	0.73	5	88.0	5	
13	6.02	5	0.86	5	85.8	5	
14	6.05	5	1.34	5	77.8	5	
15	5.97	1	1.71	1	71.4	1	
16	6.05	5	0.62	5	89.7	5	
17	6.06	4	0.55	4	90.9	4	
18	6.75	1	0.37	1	94.5	1	
19	**Data acquisition system down**						
20							
21							
22							
23	5.95	5	0.50	5	91.6	5	
AVERAGE FOR THE DAY	5.99	20	0.64	20	90.1		18 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.75	506	0.69	516	87.9		18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                     AUGUST 29, 1981

          E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0     5.98   5     0.49   5     91.9    5
    1     6.00   5     0.59   5     90.2    5
    2
    3     5.99   5     0.34   5     94.3    5
    4     6.00   5     0.37   5     93.9    5
    5
    6     5.95   5     0.41   5     93.0    5
    7     5.89   5     0.42   5     92.8    5
    8     5.93   5     0.65   5     89.0    5
    9                                              Scrubber down @ 0900
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE  5.96   7     0.47   7     92.2   7 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  5.74  496    0.68  506    88.1  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

```
                    ADIPIC ACID DEMONSTRATION

                       SCRUBBER MODULE S-2

                         AUGUST 30, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU   PTS  /MMBTU  PTS    %     PTS

     0
     1               0            0            0       Scrubber down all day
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE
   DAY              0            0           0 HOURS OF MONITORING DATA

 ROLLING
  30 DAY
 AVERAGE   5.74   474   0.68   484   88.2   17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                     AUGUST 31, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0
    1              0            0            0     Scrubber down all day
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

 AVERAGE
 FOR THE           0            0            0 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY
 AVERAGE   5.77   451   0.69   461   88.0   16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

```
                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                   SEPTEMBER 1, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
           /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0
     1               0            0             0
     2
     3
     4
     5
     6
     7
     8
     9
    10
    11
    12
    13
    14
    15
    16
    17
    18
    19
    20
    21
    22
    23


 AVERAGE
 FOR THE
   DAY               0            0        0 HOURS OF MONITORING DATA


 ROLLING
  30 DAY
 AVERAGE   5.79   427   0.70   437   88.0  15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

Scrubber down all day

```
                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                     SEPTEMBER 2, 1981

              E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
     HOUR     LB.SO2 OF   LB.SO2  OF    EFF.   OF
              /MMBTU PTS  /MMBTU  PTS    %     PTS

        0
        1             0            0             0     Scrubber down all day
        2
        3
        4
        5
        6
        7
        8
        9
       10
       11
       12
       13
       14
       15
       16
       17
       18
       19
       20
       21
       22
       23


    AVERAGE
    FOR THE          0            0          0 HOURS OF MONITORING DATA
      DAY

    ROLLING
     30 DAY   5.80  403  0.69  413  88.1  14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
    AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0							
1							Scrubber down
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16	6.84	5	0.17	5	97.6	5	
17	6.69	5	0.13	5	98.0	5	Scrubber up @ 1535
18	6.58	5	0.06	5	99.0	5	
19	6.53	5	0.21	5	96.8	5	
20	6.49	5	0.17	5	97.4	5	
21	6.45	5	0.12	5	98.1	5	
22	6.34	5	0.17	5	97.4	5	
23	6.29	5	0.12	5	98.1	5	
AVERAGE FOR THE DAY	6.52	8	0.14	8	97.8	8 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.82	400	0.67	410	88.6	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 4, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.25	5	0.19	5	96.9	5
1						
2	6.22	5	0.20	5	96.8	5
3	6.22	5	0.14	5	97.8	5
4	6.19	5	0.16	5	97.5	5
5	6.23	5	0.21	5	96.7	5
6	6.23	5	0.14	5	97.7	5
7	6.26	5	0.20	5	96.8	5
8	6.30	5	0.13	5	97.9	5
9	6.28	5	0.21	5	96.7	5
10	6.26	5	0.23	5	96.3	5
11	6.24	5	0.13	5	97.9	5
12	6.20	5	0.11	5	98.2	5
13	6.21	5	0.14	5	97.8	5
14	6.33	1	0.16	1	97.4	1
15	6.31	5	0.11	5	98.2	5
16	6.37	5	0.35	5	94.5	5
17	6.39	5	0.45	5	93.0	5
18	6.40	5	0.45	5	93.0	5
19	6.35	5	0.46	5	92.7	5
20	6.35	5	0.46	5	92.7	5
21	6.25	5	0.47	5	92.5	5
22	6.17	5	0.48	5	92.1	5
23	6.16	5	0.37	5	93.9	5
AVERAGE FOR THE DAY	6.27	23	0.26	23	95.8	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.84	403	0.60	413	89.7	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

```
                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                   SEPTEMBER 5, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

      0      6.18    5    0.46    5    92.6    5
      1      6.20    5    0.49    5    92.0    5
      2      6.28    5    0.49    5    92.2    5
      3      6.29    5    0.51    5    91.8    5
      4      6.25    5    0.48    5    92.3    5
      5      6.20    5    0.26    5    95.9    5
      6      6.17    5    0.15    5    97.6    5
      7      6.25    5    0.20    5    96.8    5
      8      6.34    5    0.11    5    98.2    5
      9      6.31    5    0.16    5    97.5    5
     10      6.28    5    0.09    5    98.6    5
     11      6.23    5    0.15    5    97.6    5
     12      6.18    5    0.15    5    97.6    5
     13      6.19    5    0.13    5    98.0    5
     14      6.60    4    0.14    4    97.8    4
     15      6.31    3    0.10    3    98.4    3
     16      6.31    5    0.13    5    97.9    5
     17      6.31    5    0.11    5    98.3    5
     18      6.35    5    0.12    5    98.1    5
     19      6.33    5    0.20    5    96.8    5
     20      6.34    5    0.05    5    99.1    5
     21      6.32    5    0.14    5    97.7    5
     22      6.33    5    0.16    5    97.5    5
     23      6.38    5    0.10    5    98.4    5


  AVERAGE
  FOR THE    6.29   24    0.21   24    96.6   24 HOURS OF MONITORING DATA
   DAY


  ROLLING
   30 DAY    5.87  403    0.54  413    90.8   14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 6, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.34	5	0.07	5	98.8	5
1	6.33	5	0.11	5	98.2	5
2	6.28	5	0.26	5	95.8	5
3	6.28	5	0.11	5	98.2	5
4	6.27	5	0.23	5	96.4	5
5	6.26	5	0.20	5	96.8	5
6	6.33	5	0.08	5	98.8	5
7	6.28	5	0.12	5	98.0	5
8	6.27	5	0.22	5	96.5	5
9	6.28	5	0.20	5	96.8	5
10	6.22	5	0.19	5	96.9	5
11	6.24	5	0.09	5	98.5	5
12	6.25	5	0.22	5	96.5	5
13	6.26	5	0.08	5	98.7	5
14	6.21	5	0.17	5	97.2	5
15	6.19	5	0.09	5	98.6	5
16	6.22	5	0.10	5	98.4	5
17	6.15	5	0.06	5	99.1	5
18	6.17	5	0.11	5	98.2	5
19	6.16	5	0.16	5	97.4	5
20	6.17	5	0.16	5	97.5	5
21	6.19	5	0.17	5	97.2	5
22	6.17	4	0.12	4	98.1	4
23	Data acquisition system down					
AVERAGE FOR THE DAY	6.24	23	0.14	23	97.7	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.91	403	0.49	413	91.7	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 7, 1981

Data acquisition system down

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0						
1						
2						
3						
4						
5						
6						
7						
8						
9	6.15	3	0.08	3	98.7	3
10	6.14	5	0.13	5	97.9	5
11	6.14	5	0.14	5	97.7	5
12	6.33	5	0.12	5	98.1	5
13	6.33	5	0.20	5	96.9	5
14	6.45	5	0.10	5	98.5	5
15	6.43	1	0.05	1	99.2	1
16						
17						
18						
19						
20						
21						
22						
23						
AVERAGE FOR THE DAY	6.28	7	0.12	7	98.0	6 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.93	398	0.45	398	92.4	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Scrubber down @ 1500

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                     SEPTEMBER 8, 1981

            E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2  OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS    %     PTS

      0   Scrubber down
      1
      2
      3
      4
      5
      6
      7
      8
      9                                          Scrubber up @ 0815
     10
     11     6.26     4    0.15    4    97.6    4
     12     6.45     5    0.10    5    98.4    5
     13     6.58     5    0.04    5    99.4    5
     14     6.68     4    0.12    4    98.1    4
     15     6.66     5    0.17    5    97.5    5
     16     6.70     2    0.18    2    97.3    2
     17
     18     6.62     5    0.20    5    97.0    5
     19     6.55     5    0.08    5    98.8    5
     20     6.58     5    0.12    5    98.1    5
     21     6.46     5    0.12    5    98.2    5
     22     6.38     5    0.19    5    97.0    5
     23
                                                 Scrubber down @ 2330

  AVERAGE
  FOR THE   6.54   11   0.13   11   97.9  11 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY   5.96  384   0.40  394   93.2  13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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            ADIPIC ACID DEMONSTRATION

              SCRUBBER MODULE S-2

               SEPTEMBER 9, 1981

         E(IN)   NO. E(OUT)  NO. REDUC. NO.
  HOUR  LB.SO2   OF  LB.SO2  OF   EFF.  OF
        /MMBTU  PTS  /MMBTU PTS    %    PTS

    0
    1             0           0          0      Scrubber down all day
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20
   21
   22
   23

AVERAGE
FOR THE           0           0         0 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY
AVERAGE   5.97   360  0.33   370  94.4  12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 10, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	Scrubber down					
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14	5.35	4	0.10	4	98.2	4
15	5.40	3	0.06	3	98.9	3
16						
17	5.92	4	0.13	4	97.8	4
18	5.96	5	0.11	5	98.2	5
19	5.92	5	0.14	5	97.7	5
20	5.93	5	0.15	5	97.5	5
21	5.92	5	0.11	5	98.2	5
22	5.93	5	0.15	5	97.5	5
23	5.92	5	0.15	5	97.4	5
AVERAGE FOR THE DAY	5.80	9	0.12	9	97.9	9 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.95	347	0.28	357	95.3	11 DAYS WITH 18 OR MORE HOURS OF MONITORING DAT

Scrubber up @ 0935
Data acquisition system down

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 11, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.91	5	0.13	5	97.8	5
1	5.83	5	0.23	5	96.1	5
2	5.86	5	0.15	5	97.4	5
3	5.86	5	0.16	5	97.3	5
4	5.78	5	0.27	5	95.3	5
5	5.75	5	0.13	5	97.8	5
6	5.73	5	0.16	5	97.2	5
7	5.75	5	0.13	5	97.7	5
8	5.75	5	0.07	5	98.7	5
9	5.79	5	0.11	5	98.2	5
10	5.77	5	0.20	5	96.5	5
11	5.85	5	0.19	5	96.8	5
12	5.96	5	0.21	5	96.6	5
13	6.00	5	0.17	5	97.2	5
14	6.05	5	0.12	5	97.9	5
15	6.09	5	0.10	5	98.3	5
16	6.10	5	0.05	5	99.1	5
17	6.10	5	0.12	5	98.0	5
18	6.04	5	0.11	5	98.2	5
19	6.01	5	0.12	5	98.0	5
20	5.71	5	0.11	5	98.1	5
21	5.81	5	0.14	5	97.7	5
22	5.83	5	0.13	5	97.8	5
23	5.84	5	0.11	5	98.1	5
AVERAGE FOR THE DAY	5.88	24	0.14	24	97.6	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	5.95	371	0.26	372	95.6	12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

D-456

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                 ADIPIC ACID DEMONSTRATION

                    SCRUBBER MODULE S-2

                    SEPTEMBER 12, 1981

                E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR        LB.SO2   OF   LB.SO2  OF    EFF.   OF
               /MMBTU  PTS   /MMBTU  PTS    %     PTS

     0          5.98     5    0.23    5    96.1    5
     1          6.00     5    0.12    5    98.0    5
     2          5.98     5    0.10    5    98.3    5
     3          6.00     5    0.11    5    98.1    5
     4          6.00     5    0.22    5    96.3    5
     5          5.99     5    0.19    5    96.9    5
     6          6.00     5    0.16    5    97.4    5
     7          6.03     5    0.20    5    96.7    5
     8          6.06     5    0.20    5    96.7    5
     9          6.02     5    0.22    5    96.4    5
    10          5.99     2    0.22    2    96.3    2
    11   Data acquisition system down
    12
    13
    14
    15
    16          6.14     3    0.15    3    97.5    3
    17          6.15     5    0.17    5    97.2    5
    18          6.11     5    0.08    5    98.7    5
    19          6.11     5    0.21    5    96.5    5
    20   Printer ran out of paper
    21
    22
    23


 AVERAGE
 FOR THE        6.04    15    0.17   15    97.1   15 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY        5.96   374    0.24  375    96.0   12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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             ADIPIC ACID DEMONSTRATION

                SCRUBBER MODULE S-2

                SEPTEMBER 13, 1981

            E(IN)  NO. E(OUT) NO. REDUC. NO.
   HOUR    LB.SO2 OF  LB.SO2 OF    EFF.  OF
           /MMBTU PTS /MMBTU PTS    %    PTS

     0      6.18   5   0.14   5   97.8    5
     1      6.24   5   0.13   5   98.0    5
     2      6.16   5   0.05   5   99.2    5
     3      6.19   5   0.13   5   97.9    5
     4      6.15   5   0.11   5   98.2    5
     5      6.18   5   0.17   5   97.3    5
     6      6.24   5   0.17   5   97.3    5
     7      6.26   5   0.13   5   97.9    5
     8      6.29   5   0.13   5   97.9    5
     9      6.29   5   0.10   5   98.4    5
    10      6.30   5   0.14   5   97.7    5
    11      6.33   4   0.17   4   97.3    4
    12      6.33   5   0.16   5   97.4    5
    13      6.38   5   0.04   5   99.3    5
    14      6.39   5   0.15   5   97.7    5
    15      6.34   5   0.13   5   97.9    5
    16      6.38   5   0.19   5   97.0    5
    17      6.33   5   0.06   5   99.0    5
    18      6.27   5   0.13   5   98.0    5
    19      6.23   5   0.05   5   99.2    5
    20      6.24   5   0.16   5   97.4    5
    21      6.24   5   0.22   5   96.5    5
    22      6.13   5   0.11   5   98.2    5
    23      6.12   5   0.03   5   99.6    5


 AVERAGE
 FOR THE    6.26  24   0.12  24   98.0  24 HOURS OF MONITORING DATA
   DAY


 ROLLING
  30 DAY    5.99 376   0.23 377   96.2  12 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 14, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.13	5	0.19	5	97.0	5	
1	6.06	5	0.12	5	98.0	5	
2	6.04	5	0.10	5	98.4	5	
3	6.04	5	0.09	5	98.6	5	
4	6.01	5	0.04	5	99.3	5	
5	5.98	5	0.06	5	99.1	5	
6	6.00	5	0.05	5	99.1	5	
7	6.04	5	0.09	5	98.5	5	
8	6.09	5	0.17	5	97.2	5	
9	6.16	2	0.21	2	96.6	2	Scrubber down @ 0915
10							
11							
12							
13	6.18	3	0.16	3	97.5	3	Scrubber up @ 1315
14	6.19	5	0.12	5	98.0	5	
15	6.17	5	0.11	5	98.3	5	
16	6.13	4	0.13	4	97.9	4	
17	6.18	5	0.09	5	98.5	5	
18	6.17	5	0.06	5	99.0	5	
19	6.16	5	0.16	5	97.5	5	
20	6.13	5	0.20	5	96.7	5	
21	6.17	5	0.18	5	97.1	5	
22	6.10	5	0.19	5	96.9	5	
23							
AVERAGE FOR THE DAY	6.11	20	0.13	20	98.0	20 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	5.99	396	0.22	397	96.3	13 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 15, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	5.98	5	0.13	5	97.8	5
1	6.03	5	0.15	5	97.5	5
2	6.08	5	0.12	5	98.0	5
3	5.98	5	0.03	5	99.6	5
4	6.00	5	0.19	5	96.9	5
5	5.97	5	0.25	5	95.8	5
6	5.91	5	0.10	5	98.3	5
7	5.98	5	0.22	5	96.3	5
8	5.94	5	0.18	5	97.0	5
9	6.04	5	0.18	5	96.9	5
10	6.10	5	0.18	5	97.1	5
11	6.09	5	0.10	5	98.4	5
12	6.08	5	0.04	5	99.3	5
13	6.08	5	0.08	5	98.6	5
14	Data acquisition system malfunction					
15	6.10	5	0.13	5	97.9	5
16	6.12	5	0.19	5	96.9	5
17	6.11	5	0.19	5	96.9	5
18	6.10	5	0.18	5	97.0	5
19	6.10	5	0.14	5	97.7	5
20	6.12	5	0.13	5	97.9	5
21	6.13	5	0.15	5	97.6	5
22	6.11	5	0.16	5	97.5	5
23						
AVERAGE FOR THE DAY	6.05	22	0.15	22	97.6	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.00	418	0.22	419	96.4	14 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 16, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.19	5	0.08	5	98.7	5
1	6.21	5	1.30	5	79.2	5
2	6.21	5	1.35	5	78.2	5
3	6.28	5	1.37	5	78.2	5
4	6.29	5	1.35	5	78.4	5
5	6.29	5	1.28	5	79.6	5
6	6.28	5	1.28	5	79.6	5
7	6.35	5	1.35	5	78.8	5
8	6.43	5	1.31	5	79.6	5
9	6.48	5	1.27	5	80.5	5
10	6.46	5	1.23	5	80.9	5
11	6.46	5	1.46	5	77.4	5
12	6.50	5	1.57	5	75.9	5
13	6.51	5	1.74	5	73.2	5
14	6.51	4	1.72	4	73.6	4
15	SO_2 monitor calibration check					
16	SO_2 monitor calibration check					
17	6.58	3	1.60	3	75.7	3
18	6.51	4	1.65	4	74.7	4
19	6.54	5	1.59	5	75.7	5
20	6.55	5	1.58	5	75.8	5
21	6.58	5	1.62	5	75.3	5
22	6.60	7	1.69	7	74.4	7
23	6.60	1	1.59	1	75.9	1
AVERAGE FOR THE DAY	6.43	22	1.41	22	78.3	21 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.02	430	0.28	431	95.4	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 17, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.71	1	0.33	1	95.1	1
1	6.59	5	1.64	5	75.1	5
2	6.54	6	1.47	6	77.6	6
3	6.57	5	1.65	5	74.9	5
4	6.58	4	1.65	4	74.9	4
5	6.58	5	1.62	5	75.4	5
6	6.62	5	1.62	5	75.5	5
7	6.64	5	1.72	5	74.1	5
8	6.69	5	1.61	5	75.9	5
9	6.69	5	1.62	5	75.9	5
10	6.68	5	1.67	5	75.0	5
11	6.53	6	1.44	6	78.0	6
12	6.44	6	1.37	6	78.7	6
13	6.50	5	1.35	5	79.3	5
14		0		0		0
15	6.60	2	1.53	2	76.8	2
16	6.69	5	1.45	4	78.0	4
17	6.60	5	1.62	5	75.5	5
18	6.51	5	1.56	5	76.0	5
19	6.72	5	1.53	5	77.2	5
20	6.64	5	1.67	5	74.9	5
21	6.70	5	1.78	5	73.5	5
22	6.72	5	1.55	5	76.9	5
23	6.76	5	1.55	5	77.1	5
AVERAGE FOR THE DAY	6.62	23	1.52	23	76.2	22 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.07	432	0.34	432	94.5	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Scrubber down @ 1400
Scrubber up @ 1525

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              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-2

                 SEPTEMBER 18, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU   PTS  /MMBTU  PTS    %     PTS

   0      6.74     5    1.52    5    77.4    5
   1      6.81     5    1.54    5    77.4    5
   2      6.74     5    1.47    5    78.3    5
   3      6.69     5    1.55    5    76.8    5
   4      6.68     5    1.57    5    76.5    5
   5      6.65     5    1.55    5    76.6    5
   6      6.61     5    1.60    5    75.9    5
   7      6.67     5    1.71    5    74.4    5
   8      6.68     5    1.69    5    74.8    5
   9      6.68     5    1.90    5    71.6    5
  10      6.65     5    1.70    5    74.4    5
  11      6.57     5    1.81    5    72.4    5
  12      6.57     4    1.81    4    72.5    4
  13      6.87     1    0.41    1    94.0    1
  14      6.61     2    1.43    2    78.4    2
  15      6.47     5    1.53    5    76.4    5
  16      6.44     5    1.38    5    78.5    5
  17      6.48     5    1.39    5    78.6    5
  18      6.50     5    1.37    5    79.0    5
  19      6.55     5    1.36    5    79.3    5
  20      6.50     5    1.20    5    81.5    5
  21      6.51     4    1.13    4    82.7    4
  22      6.51     5    1.24    5    80.9    5
  23      6.61     5    1.19    5    82.1    5

AVERAGE
FOR THE   6.62    24    1.46   24    77.2  23 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   6.12   435    0.40  435    93.4  15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                   SEPTEMBER 19, 1981

            E(IN)   NO. E(OUT)  NO. REDUC. NO.
   HOUR     LB.SO2  OF  LB.SO2  OF   EFF.  OF
            /MMBTU PTS  /MMBTU PTS    %    PTS

     0       6.74   5    1.17   5    82.7   5
     1       6.74   5    1.06   5    84.3   5
     2       6.85   5    1.06   5    84.5   5
     3       6.90   4    1.05   4    84.7   4
     4       6.97   5    1.10   5    84.2   5
     5       6.91   5    1.08   5    84.4   5
     6       6.94   5    1.05   5    84.9   5
     7       6.92   5    1.06   5    84.7   5
     8       6.89   5    1.17   5    83.1   5
     9       6.87   5    1.28   5    81.4   5
    10       6.82   5    1.23   5    82.0   5
    11       6.91   5    1.21   5    82.5   5
    12       6.67   5    1.14   5    83.0   5
    13       6.64   6    1.08   6    83.7   6
    14       6.66   5    1.01   5    84.8   5
    15       6.68   5    0.87   5    87.0   5
    16       6.67   5    0.86   5    87.2   5
    17       6.62   5    0.85   5    87.2   5
    18       6.56   5    0.85   5    87.0   5
    19       6.54   5    0.83   5    87.3   5
    20       6.56   5    0.83   5    87.4   5
    21       6.56   5    0.84   5    87.2   5
    22       6.63   5    0.91   5    86.3   5
    23       6.57   5    0.89   5    86.5   5

 AVERAGE
 FOR THE     6.74  24    1.02  24    84.9  24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     6.17 435    0.45 435    92.6  15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                  ADIPIC ACID DEMONSTRATION

                     SCRUBBER MODULE S-2

                     SEPTEMBER 20, 1981

              E(IN)  NO. E(OUT) NO. REDUC. NO.
     HOUR    LB.SO2 OF  LB.SO2 OF    EFF.  OF
             /MMBTU PTS /MMBTU PTS    %    PTS

       0      6.53   4   0.85   4   87.1   4
       1      6.50   6   0.84   6   87.0   6
       2      6.50   5   0.91   5   86.0   5
       3      6.49   5   0.98   5   84.9   5
       4      6.50   5   0.98   5   84.9   5
       5      6.45   5   0.98   5   84.8   5
       6      6.53   5   1.02   5   84.4   5
       7      6.48   4   1.04   4   83.9   4
       8      6.45   5   1.04   5   83.9   5
       9      6.42   5   1.01   5   84.3   5
      10      6.43   5   1.03   5   84.1   5
      11      6.37   5   1.06   5   83.3   5
      12      6.35   5   1.08   5   83.0   5
      13      6.29   6   1.06   6   83.2   6
      14      6.26   5   1.08   5   82.8   5
      15      6.28   5   1.34   5   78.6   5
      16      6.24   5   1.48   5   76.3   5
      17      6.28   5   1.51   5   75.9   5
      18      6.32   5   1.54   5   75.6   5
      19      6.25   4   1.51   4   75.9   4
      20      6.25   5   1.48   5   76.3   5
      21      6.27   5   1.43   5   77.2   5
      22      6.20   5   1.47   5   76.2   5
      23      6.26   5   1.43   5   77.2   5


    AVERAGE
    FOR THE   6.37  24   1.17  24   81.5  24 HOURS OF MONITORING DATA
      DAY


    ROLLING
     30 DAY   6.20 436   0.51 436   91.8  15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
    AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 21, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.27	4	1.43	4	77.2	4
1	6.28	5	1.40	5	77.7	5
2	6.22	5	1.37	5	77.9	5
3	6.17	5	1.37	5	77.8	5
4	6.19	5	1.39	5	77.6	5
5	6.23	5	1.33	5	78.7	5
6	6.18	5	1.07	5	82.7	5
7	6.22	5	1.04	5	83.2	5
8	6.25	5	1.21	5	80.7	5
9	6.19	1	0.50	1	91.9	1
10	6.32	5	1.24	5	80.4	5
11	6.20	5	1.27	5	79.6	5
12	6.22	5	1.39	5	77.7	5
13	6.28	5	1.40	5	77.7	5
14	6.25	5	1.36	5	78.3	5
15	6.25	5	1.22	5	80.5	5
16	6.30	5	1.27	5	79.9	5
17	6.33	6	1.27	6	79.9	6
18	6.33	5	1.27	5	80.0	5
19	6.32	5	1.29	5	79.6	5
20	6.37	4	1.36	4	78.7	4
21	6.36	5	1.34	5	79.0	5
22	6.33	5	1.26	5	80.0	5
23	6.47	6	1.24	6	81.0	6
AVERAGE FOR THE DAY	6.27	24	1.26	24	79.4	23 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.22	437	0.57	438	90.8	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 22, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.26	5	1.22	5	80.6	5
1	6.17	5	1.06	5	82.8	5
2	6.15	6	1.09	6	82.3	6
3	6.14	5	1.00	5	83.7	5
4	6.14	5	1.03	5	83.3	5
5	6.15	5	0.99	5	83.9	5
6	6.18	5	1.02	5	83.6	5
7	6.23	5	1.37	5	78.0	5
8	6.20	5	1.34	5	78.3	5
9	6.24	5	1.35	5	78.4	5
10	6.25	5	1.53	5	75.5	5
11	6.24	5	1.64	5	73.8	5
12	6.26	5	1.66	5	73.4	5
13	6.23	5	1.45	5	76.7	5
14	6.11	5	1.36	5	77.7	5
15	6.13	5	1.35	5	78.0	5
16	6.14	5	1.36	5	77.9	5
17	6.16	4	1.36	4	78.0	4
18	6.22	5	1.34	5	78.5	5
19	6.22	5	1.38	5	77.8	5
20	6.23	5	1.43	5	77.1	5
21	6.26	5	1.43	5	77.2	5
22	6.32	5	1.41	5	77.7	5
23	6.47	5	1.32	5	79.7	5
AVERAGE FOR THE DAY	6.21	24	1.31	24	78.9	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.24	439	0.63	440	89.9	15 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 23, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.36	4	1.17	4	81.7	4
1	6.36	5	1.19	5	81.2	5
2	6.39	5	1.14	5	82.1	5
3	6.42	5	1.16	5	81.9	5
4	6.49	5	1.21	5	81.4	5
5	6.50	5	1.19	5	81.7	5
6	6.59	5	1.25	5	81.1	5
7	6.66	5	1.48	5	77.8	5
8	6.53	5	1.53	5	76.6	5
9	6.55	5	1.37	5	79.1	5
10	6.63	4	1.44	4	78.3	4
11	6.60	5	1.49	5	77.4	5
12	6.67	5	1.60	5	76.0	5
13	6.72	5	1.70	5	74.7	5
14	6.70	5	1.67	5	75.1	5
15	6.72	5	1.57	5	76.6	5
16	6.63	3	1.51	3	77.2	3
17	6.66	5	1.61	5	75.9	5
18	6.65	5	1.58	5	76.2	5
19	6.68	5	1.55	5	76.8	5
20	6.67	5	1.55	5	76.9	5
21	6.63	5	1.54	5	76.7	5
22	6.72	5	1.59	5	76.3	5
23	6.59	5	1.30	5	80.3	5
AVERAGE FOR THE DAY	6.59	24	1.43	24	78.3	24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.28	452	0.68	453	89.1	16 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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              ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-2

                 SEPTEMBER 24, 1981

            E(IN)  NO.  E(OUT) NO.  REDUC. NO.
   HOUR    LB.SO2  OF  LB.SO2  OF    EFF.  OF
           /MMBTU  PTS /MMBTU  PTS    %    PTS

     0
     1      6.52    5   1.21    5    81.4   5
     2      6.59    1   1.16    1    82.5   1
     3      6.49    5   1.15    5    82.2   5
     4      6.41    5   1.17    5    81.8   5
     5      6.40    5   1.12    5    82.5   5
     6      6.39    5   1.12    5    82.4   5
     7      6.43    5   1.21    5    81.3   5
     8
     9      6.45    5   1.16    5    82.0   5
    10      6.40    4   1.12    4    82.5   4
    11      6.35    5   1.07    5    83.1   5
    12      5.26    5   1.92    4    59.3   4         Scrubber down @ 1210
    13      5.75    5           0           0
    14      5.75    5           0           0
    15      5.40    4   4.08    2     0.8   1
    16      6.26    5   1.25    5    80.1   5         Scrubber up @ 1600
    17      6.22    5   1.03    5    83.4   5
    18      6.19    5   0.83    5    86.6   5
    19      6.19    5   0.90    5    85.5   5
    20      6.18    6   0.94    6    84.8   6
    21      6.17    5   1.10    5    82.2   5
    22      6.22    5   1.24    5    80.0   5
    23      6.14    5   1.05    5    82.9   5

 AVERAGE
 FOR THE    6.19   22   1.29   20    81.3  18 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.27  474   0.71  473    88.7  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                   SEPTEMBER 25, 1981

          E(IN)  NO.  E(OUT)  NO.  REDUC.  NO.
 HOUR    LB.SO2  OF   LB.SO2  OF    EFF.   OF
         /MMBTU  PTS  /MMBTU  PTS    %     PTS

   0
   1              0    2.23    1
   2              0    3.23    1            0
   3              0            0            0      Scrubber down @ 0130
   4                                        0
   5
   6
   7
   8
   9
  10
  11
  12
  13
  14
  15
  16
  17
  18
  19
  20
  21
  22
  23


 AVERAGE
 FOR THE
   DAY            0    2.73    2         0 HOURS OF MONITORING DATA


 ROLLING
  30 DAY   6.28  467   0.72   468  88.5  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                 ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                   SEPTEMBER 26, 1981

            E(IN)   NO. E(OUT)  NO. REDUC. NO.
   HOUR    LB.SO2  OF   LB.SO2  OF   EFF.  OF
           /MMBTU PTS  /MMBTU  PTS    %    PTS
      0
      1    Scrubber down
      2
      3
      4
      5
      6
      7
      8
      9
     10
     11
     12
     13
     14
     15
     16
     17
     18
     19
     20
     21     6.07    3    0.63    3   89.6    3
     22     6.11    5    0.89    5   85.5    5        Scrubber up @ 2125
     23     6.07    5    0.79    5   86.9    5

 AVERAGE
 FOR THE    6.08    3    0.77    3   87.4   3 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.29  451    0.74  451   88.3  17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 27, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.22	5	0.54	5	91.3	5	
1	6.18	5	0.49	5	92.1	5	
2	6.20	5	0.53	5	91.5	5	
3	6.18	6	0.48	6	92.2	6	
4	6.21	5	0.74	5	88.0	5	
5	6.24	5	0.68	5	89.1	5	
6	6.22	5	0.61	5	90.2	5	
7	6.26	5	0.58	5	90.7	5	
8	6.29	5	0.49	5	92.2	5	
9	6.32	5	0.53	5	91.7	5	
10	6.31	5	0.59	5	90.6	5	
11	6.25	5	0.65	5	89.6	5	
12	6.28	5	0.50	5	92.0	5	
13	6.18	5	0.49	5	92.0	5	
14	6.30	5	0.69	5	89.1	5	
15	6.36	5	0.68	5	89.4	5	
16	6.33	5	0.75	5	88.1	5	
17	6.29	5	0.60	5	90.5	5	
18	6.31	5	0.54	5	91.5	5	
19	6.34	5	0.61	5	90.4	5	
20	6.32	5	0.58	5	90.9	5	
21	6.36	3	0.56	3	91.2	3	
22	6.36	5	0.53	5	91.7	5	
23	6.26	5	0.47	5	92.4	5	
AVERAGE FOR THE DAY	6.27	24	0.58	24	90.8		24 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.30	455	0.73	455	88.3		17 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                  SEPTEMBER 28, 1981

          E(IN)  NO.  E(OUT) NO.  REDUC. NO.
   HOUR   LB.SO2 OF   LB.SO2 OF    EFF.  OF
          /MMBTU PTS  /MMBTU PTS    %    PTS

    0      6.35   5    0.47   5    92.6   5
    1      6.40   5    0.47   5    92.7   5
    2      6.37   5    0.46   5    92.7   5
    3      6.43   5    0.46   5    92.8   5
    4      6.46   5    0.46   5    92.9   5
    5      6.52   5    0.47   5    92.8   5
    6      6.59   5    0.45   5    93.2   5
    7      6.57   5    0.46   5    93.0   5
    8      6.63   5    0.51   5    92.3   5
    9      6.49   5    0.59   5    90.8   5
   10      6.49   5    0.60   5    90.8   5
   11      6.45   1    0.68   1    89.5   1
   12      6.45   1    0.65   1    89.9   1
   13      6.41   5    0.68   5    89.3   5
   14      6.36   4    0.69   4    89.1   4
   15      6.48   3    0.59   3    91.0   3
   16      6.43   5    0.62   5    90.4   5
   17      6.46   5    0.61   5    90.6   5
   18      6.44   5    0.64   5    90.1   5
   19      6.45   5    0.59   5    90.9   5
   20      6.47   5    0.60   5    90.7   5
   21      6.46   5    0.62   5    90.5   5
   22      6.45   5    0.44   5    93.1   5
   23      6.46   5    0.40   5    93.9   5

AVERAGE
FOR THE    6.46  24    0.55  24    91.7  22 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY    6.32  472   0.73  472   88.5  18 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                      SEPTEMBER 29, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
   HOUR     LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU  PTS  /MMBTU  PTS     %     PTS

     0       6.25    5    0.35    5    94.4     5
     1       6.25    5    0.31    5    95.1     5
     2       6.33    5    0.32    5    95.0     5
     3       6.27    5    0.33    5    94.7     5
     4       6.24    5    0.30    5    95.2     5
     5       6.23    5    0.31    5    95.0     5
     6       6.26    5    0.37    5    94.0     5
     7       6.23    5    0.43    5    93.1     5
     8       6.33    5    0.41    5    93.5     5
     9       6.35    5    0.39    5    93.9     5
    10       6.33    5    0.45    5    92.9     5
    11       6.28    5    0.40    5    93.7     5
    12       6.28    5    0.38    5    93.9     5
    13       6.23    6    0.36    6    94.2     6
    14       6.19    4    0.39    4    93.7     4
    15       6.30    5    0.37    5    94.2     5
    16       6.32    5    0.33    5    94.8     5
    17       6.35    5    0.33    5    94.7     5
    18       6.32    5    0.31    5    95.1     5
    19       6.39    5    0.33    5    94.8     5
    20       6.36    5    0.31    5    95.1     5
    21       6.37    5    0.30    5    95.2     5
    22       6.35    5    0.29    5    95.5     5
    23       6.37    5    0.29    5    95.4     5

 AVERAGE
 FOR THE     6.30   24    0.35   24    94.5   24 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY     6.32  496    0.71  496    88.7   19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

SEPTEMBER 30, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.24	4	0.31	4	95.0	4	
1	6.20	5	0.30	5	95.2	5	
2	6.25	5	0.31	5	95.1	5	
3	6.18	5	0.29	5	95.3	5	
4	6.20	5	0.28	5	95.5	5	
5	6.24	4	0.30	4	95.2	4	
6	6.19	5	0.30	5	95.2	5	
7	6.22	5	0.28	5	95.5	5	
8	6.27	5	0.30	5	95.3	5	
9	6.26	5	0.36	5	94.2	5	
10							
11	6.19	2	0.35	2	94.3	2	**Scrubber down @ 1120**
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							**Scrubber up @ 1935**
22	6.35	5	0.29	5	95.5	5	**Data acquisition system down**
23							
AVERAGE FOR THE DAY	6.23	12	0.31	12	95.1	12 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.31	508	0.70	508	88.9	19 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                        OCTOBER 1, 1981

             E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
    HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
            /MMBTU   PTS  /MMBTU  PTS    %     PTS

      0      6.32     3    0.33    3    94.7    3
      1      6.35     5    0.34    5    94.7    5
      2      6.35     5    0.34    5    94.7    5
      3      6.45     5    0.36    5    94.4    5
      4      6.46     4    0.37    4    94.2    4
      5      6.52     5    0.38    5    94.2    5
      6      6.59     5    0.38    5    94.3    5
      7      6.65     5    0.39    5    94.1    5
      8      6.61     6    0.37    6    94.4    6
      9      6.63     5    0.38    5    94.3    5
     10      6.65     6    0.40    5    94.0    5
     11      6.67     5    0.33    5    95.1    5
     12      6.66     5    0.30    5    95.6    5
     13      6.66     5    0.26    5    96.1    5
     14      6.67     1    0.28    1    95.8    1
     15      6.46     3    0.22    3    96.5    3
     16      6.48     5    0.23    5    96.5    5
     17      6.46     5    0.23    5    96.5    5
     18      6.49     5    0.24    5    96.3    5
     19      6.49     5    0.25    5    96.2    5
     20      6.57     5    0.24    5    96.3    5
     21      6.56     5    0.25    5    96.1    5
     22      6.51     5    0.25    5    96.2    5
     23      6.75     5    0.30    5    95.6    5

  AVERAGE
  FOR THE    6.54    24    0.31   24    95.3   23 HOURS OF MONITORING DATA
    DAY

  ROLLING
   30 DAY    6.32   532    0.68  532    89.2   20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
  AVERAGE
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                ADIPIC ACID DEMONSTRATION

                   SCRUBBER MODULE S-2

                    OCTOBER 2, 1981

           E(IN)   NO. E(OUT)  NO. REDUC. NO.
  HOUR    LB.SO2   OF  LB.SO2  OF   EFF.  OF
          /MMBTU  PTS  /MMBTU PTS    %    PTS

   0        6.49   5    0.26   5    95.9   5
   1        6.53   5    0.26   5    95.9   5
   2        6.61   5    0.28   5    95.8   5
   3        6.59   6    0.29   6    95.6   6
   4        6.56   5    0.32   5    95.2   5
   5        6.69   5    0.32   5    95.2   5
   6        6.73   5    0.34   5    95.0   5
   7        6.81   5    0.36   5    94.6   5
   8        6.69   5    0.31   5    95.3   5
   9        6.77   5    0.32   5    95.3   5
  10        6.73   5    0.32   5    95.2   5
  11        6.73   5    0.36   5    94.7   5
  12        6.73   4    0.37   4    94.5   4
  13        6.71   5    0.35   5    94.7   5
  14        6.61   5    0.33   5    95.0   5
  15        6.70   5    0.34   5    95.0   5
  16        6.65   2    0.32   2    95.2   2
  17        6.63   5    0.34   5    94.9   5
  18        6.74   5    0.37   5    94.5   5
  19        6.52   5    0.36   5    94.5   5
  20        6.58   5    0.39   5    94.1   5
  21        6.57   5    0.34   5    94.9   5
  22        6.62   5    0.35   5    94.7   5
  23        6.61   5    0.35   5    94.7   5

AVERAGE
FOR THE     6.65  24    0.33  24    95.0  24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY     6.34 556    0.67 556    89.5  21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

OCTOBER 3, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS	
0	6.57	5	0.35	5	94.7	5	
1	6.63	5	0.37	5	94.5	5	
2	6.86	5	0.38	5	94.5	5	
3	6.66	5	0.39	5	94.2	5	
4	6.64	5	0.39	5	94.1	5	
5	6.65	5	0.38	5	94.3	5	
6	6.68	5	0.41	5	93.9	5	
7	6.61	6	0.40	6	93.9	6	
8	6.64	4	0.43	4	93.5	4	
9	6.60	5	0.46	5	93.0	5	
10	6.61	5	0.54	5	91.9	5	
11	6.53	5	0.48	5	92.7	5	
12	6.51	5	0.40	5	93.8	5	
13	6.48	5	0.41	5	93.7	5	
14	6.43	5	0.39	5	93.9	5	
15	6.43	5	0.77	5	87.9	5	
16	6.43	5	0.41	5	93.7	5	
17	6.40	5	0.43	5	93.3	5	
18	6.41	5	0.47	5	92.6	5	
19	6.39	5	0.47	5	92.7	5	
20	6.45	5	0.49	5	92.4	5	
21	6.43	5	0.44	5	93.2	5	
22	6.43	5	0.43	5	93.3	5	
23	6.44	5	0.40	5	93.8	5	
AVERAGE FOR THE DAY	6.54	24	0.44	24	93.3	24 HOURS OF MONITORING DATA	
ROLLING 30 DAY AVERAGE	6.34	572	0.67	572	89.5	22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA	

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               ADIPIC ACID DEMONSTRATION

                 SCRUBBER MODULE S-2

                   OCTOBER 4. 1981

         E(IN)  NO. E(OUT) NO. REDUC. NO.
 HOUR    LB.SO2 OF  LB.SO2 OF   EFF.  OF
         /MMBTU PTS /MMBTU PTS   %    PTS

   0      6.42   5   0.41   5   93.7   5
   1      6.43   5   0.42   5   93.4   5
   2      6.37   5   0.42   5   93.4   5
   3      6.42   5   0.43   5   93.3   5
   4      6.43   5   0.41   5   93.6   5
   5      6.43   5   0.42   5   93.4   5
   6      6.45   5   0.40   5   93.9   5
   7      6.46   5   0.44   5   93.2   5
   8      6.50   5   0.45   5   93.0   5
   9      6.44   5   0.43   5   93.3   5
  10      6.51   5   0.42   5   93.6   5
  11      6.43   5   0.43   5   93.3   5
  12      6.40   5   0.42   5   93.5   5
  13      6.43   5   0.44   5   93.2   5
  14      6.40   5   0.46   5   92.7   5
  15      6.37   5   0.47   5   92.7   5
  16      6.32   5   0.45   5   92.8   5
  17      6.38   5   0.46   5   92.8   5
  18      6.46   5   0.43   5   93.3   5
  19      6.42   5   0.42   5   93.4   5
  20      6.40   5   0.42   5   93.5   5
  21      6.42   5   0.40   5   93.7   5
  22      6.40   5   0.43   5   93.3   5
  23      6.39   2   0.42   2   93.5   2

AVERAGE
FOR THE   6.42  24   0.43  24   93.3  24 HOURS OF MONITORING DATA
  DAY

ROLLING
 30 DAY   6.35  573  0.67  573  89.4  22 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
AVERAGE
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ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

OCTOBER 5, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.31	5	0.40	5	93.6	5
1	6.28	5	0.36	5	94.3	5
2	6.23	5	0.36	5	94.2	5
3	6.19	5	0.34	5	94.4	5
4	6.17	5	0.33	5	94.6	5
5	6.17	5	0.34	5	94.5	5
6	6.20	5	0.38	5	93.9	5
7	6.33	5	0.40	5	93.6	5
8	6.30	5	0.41	5	93.5	5
9	6.23	5	0.39	5	93.7	5
10	6.22	5	0.42	5	93.3	5
11	6.12	5	0.47	5	92.3	5
12	6.07	4	0.49	4	92.0	4
13	6.07	2	0.48	2	92.1	2
14	6.00	5	0.46	5	92.3	5
15	5.85	5	0.47	5	92.0	5
16	5.79	5	0.43	5	92.5	5
17	5.78	5		0		0
18	5.76	5		0		0
19	5.78	5		0		0
20	5.77	5		0		0
21	5.82	5		0		0
22	5.75	5		0		0
23	5.99	5		0		0
AVERAGE FOR THE DAY	6.05	24	0.41	17	93.4	17 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.34	573	0.68	566	89.2	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA

Outlet O_2 monitor down

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                    ADIPIC ACID DEMONSTRATION

                      SCRUBBER MODULE S-2

                        OCTOBER 6, 1981

            E(IN)   NO. E(OUT)  NO. REDUC. NO.
   HOUR    LB.SO2  OF  LB.SO2  OF   EFF.  OF
           /MMBTU  PTS /MMBTU  PTS   %    PTS

     0      5.65    5            0           0
     1      5.79    5            0           0
     2      5.85    5            0           0
     3      5.88    5            0           0
     4      5.89    5            0           0
     5      5.91    5            0           0
     6      5.99    5            0           0
     7      5.99    4            0           0
     8      6.23    5            0           0
     9      6.18    5            0           0
    10      6.23    5            0           0
    11      6.23    5            0           0
    12      6.27    5            0           0
    13      6.19    5            0           0
    14      6.19    5            0           0
    15      6.25    2    0.47    2   92.5    2
    16      6.34    5    0.38    5   94.0    5
    17      6.31    5    0.35    5   94.4    5
    18      6.26    5    0.29    5   95.4    5
    19      6.26    5    0.26    5   95.9    5
    20      6.33    4    0.22    4   96.6    4
    21      6.38    5    0.21    5   96.6    5
    22      6.55    5    0.28    5   95.7    5
    23      6.24    3    0.22    3   96.5    3

 AVERAGE
 FOR THE    6.14   24    0.30    9   95.3   9 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY    6.34  574    0.70  552   89.0  20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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Outlet O_2 monitor down

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              ADIPIC ACID DEMONSTRATION

                SCRUBBER MODULE S-2

                  OCTOBER 7, 1981

          E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR   LB.SO2   OF   LB.SO2  OF    EFF.   OF
         /MMBTU   PTS  /MMBTU  PTS    %     PTS

    0
    1                                              Scrubber down @ 0000
    2
    3
    4
    5
    6
    7
    8
    9
   10
   11
   12
   13
   14
   15
   16
   17
   18
   19
   20     6.38    4     0.54    5    91.5    4     Scrubber up @ 1900
   21     6.44    5     0.53    5    91.8    5
   22     6.41    5     0.55    5    91.4    5
   23     6.44    4     0.52    5    91.6    4

 AVERAGE
 FOR THE  6.42    4     0.53    4    91.6   4 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY  6.34   571    0.71   549   88.9  20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
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                ADIPIC ACID DEMONSTRATION

                  SCRUBBER MODULE S-2

                    OCTOBER 8, 1981

           E(IN)   NO.  E(OUT)  NO.  REDUC.  NO.
  HOUR    LB.SO2   OF   LB.SO2  OF    EFF.   OF
          /MMBTU  PTS  /MMBTU  PTS    %     PTS

    0      6.39    5    0.52    5    91.9    5
    1      6.42    5    0.52    5    91.9    5
    2      6.39    5    0.62    5    90.4    5
    3      6.39    5    0.57    5    91.1    5
    4      6.35    5    0.57    5    91.0    5
    5      6.47    5    0.57    5    91.2    5
    6      6.45    5    0.65    5    90.0    5
    7      6.48    5    0.75    5    88.4    5
    8      6.55    3    0.69    3    89.5    3
    9
   10                                               Data acquisition system malfunction
   11
   12
   13
   14
   15
   16
   17
   18      6.52    1    1.61    1    75.3    1
   19      6.52    5    1.52    5    76.7    5
   20      6.53    5    1.58    5    75.7    5
   21
   22
   23


 AVERAGE
 FOR THE   6.45   12    0.85   12    88.0  11 HOURS OF MONITORING DATA
   DAY

 ROLLING
  30 DAY   6.34  572    0.72  550    88.6  20 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA
 AVERAGE
```

ADIPIC ACID DEMONSTRATION

SCRUBBER MODULE S-2

OCTOBER 9, 1981

HOUR	E(IN) LB.SO2 /MMBTU	NO. OF PTS	E(OUT) LB.SO2 /MMBTU	NO. OF PTS	REDUC. EFF. %	NO. OF PTS
0	6.31	5	1.52	5	75.9	5
1	6.46	5	1.68	5	74.0	5
2	6.38	5	1.63	5	74.5	5
3	6.41	5	1.64	5	74.4	5
4	6.40	5	1.64	5	74.4	5
5	6.41	5	1.67	5	73.9	5
6	6.45	5	1.72	5	73.4	5
7	6.46	5	1.81	5	71.9	5
8	6.47	5	1.80	5	72.2	5
9	6.49	3	1.80	3	72.2	3
10	6.47	1	1.72	1	73.4	1
11	6.34	5	1.88	5	70.3	5
12	6.29	5	1.82	5	71.1	5
13	6.33	4	1.62	4	74.4	4
14	6.32	3	1.78	3	71.8	3
15	6.33	1	1.83	1	71.1	1
16	6.23	5	1.76	5	71.7	5
17	6.18	5	1.77	5	71.4	5
18	6.16	5	1.69	5	72.4	5
19	6.12	2	1.79	2	70.7	2
20						
21						
22						
23	6.13	4	1.55	4	74.8	4
AVERAGE FOR THE DAY	6.34	21	1.72	21	72.9	19 HOURS OF MONITORING DATA
ROLLING 30 DAY AVERAGE	6.34	593	0.76	571	88.0	21 DAYS WITH 18 OR MORE HOURS OF MONITORING DATA